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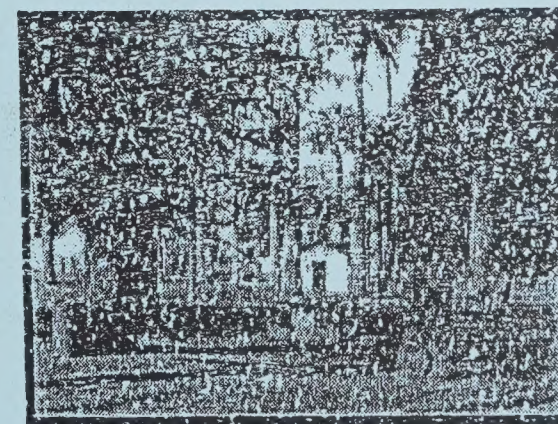
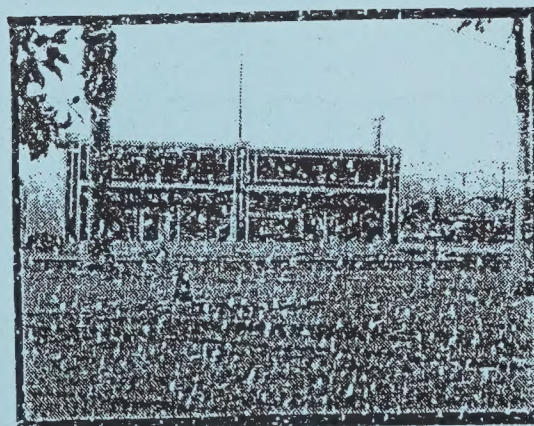
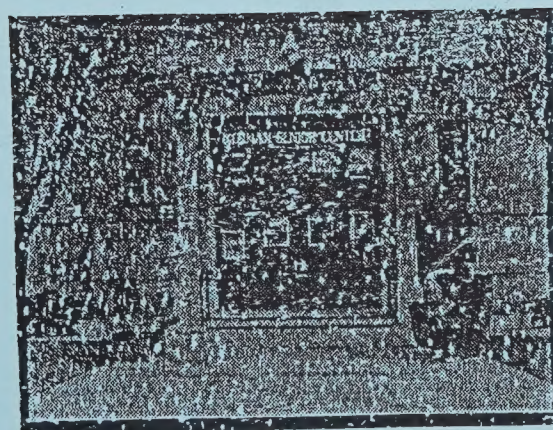
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Kerman General Plan

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1993 Kerman General Plan

Kerman, California

Prepared for:

City of Kerman

By:

Collins & Associates
Planning Consultants

VISALIA, CA.

1993 Kerman General Plan and Draft Environmental Impact Report

State Clearinghouse # 94032066

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Kerman Planning Commission

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Adopted by Kerman City Council

Resolution #94-52

Adopted by Kerman Planning Commission

Resolution #94-03

Prepared by:

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Part 1 General Plan



PART 1

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CHAPTER 1: INTRODUCTION

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INTRODUCTION

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CHAPTER 1 • INTRODUCTION

KERMAN

Kerman is located on the west side of Fresno County in the southern portion of the San Joaquin Valley. It is bisected by State Route 145 (Madera Avenue), which runs north/south, and State Route 180 (Whitesbridge Road), which runs east/west. State Highway 99, the major highway through the San Joaquin Valley, is 15 miles east of Kerman.

Kerman is 17 miles south of Madera, county seat of Madera County, and 15 miles west of Fresno, county seat of Fresno County. The smaller cities of San Joaquin and Mendota are about 13 miles southwest and 20 miles west, respectively. (see Exhibit 1)

THE GENERAL PLAN

In an effort to insure that land and resources within the State of California are properly managed and developed and that the health, safety and welfare of its citizens are protected, each California city is required to prepare a long-term, comprehensive planning document, which details how the city will physically develop. This document - the General Plan - contains seven mandated elements - land use, circulation, housing, open space, conservation, safety and noise. The Kerman General Plan will combine open space and conservation into one element. In addition, a non-mandatory element - recreation - will be combined with these two previously mentioned elements.

Kerman's vision and expectations for the "future" are expressed through its General Plan - a development "blueprint" for the year 2013. Specifically, Kerman residents have expressed their vision and expectations for the future in the goals, policies and action programs contained in the General Plan. In addition, the land use and circulation maps of the General Plan provide a visual display of the future Kerman. The ideas and thoughts reflected in the goals, policies and action programs and the land use and circulation maps resulted from community surveys and workshops, study sessions and public hearings.

The primary goal of the General Plan is to facilitate a well-planned community. Kerman's success in fulfilling this goal will depend on how well the City adheres to the General Plan - a decision-making tool that guides future decisions on the physical development of Kerman. In this regard, the General Plan can:

- guide the Planning Commission and City Council on land use, circulation, housing and capital improvement decisions;
- inform the public where certain types of development will occur in the community;
- educate the public on how Kerman's resources will be managed; and
- provide the private sector with a document upon which it can base investment decisions.

THE KERMAN PLANNING AREA

The Kerman planning area encompasses land within Kerman's Sphere of Influence (SOI). The SOI contains 3.73 square miles of which, 1.91 square miles is contained within the city limits (see Exhibit 2). The planning area contains the urbanized portion of Kerman and surrounding agricultural lands. It is generally divided into four quadrants. Kearney Boulevard divides the planning area north and south, and Madera Avenue divides it east and west.

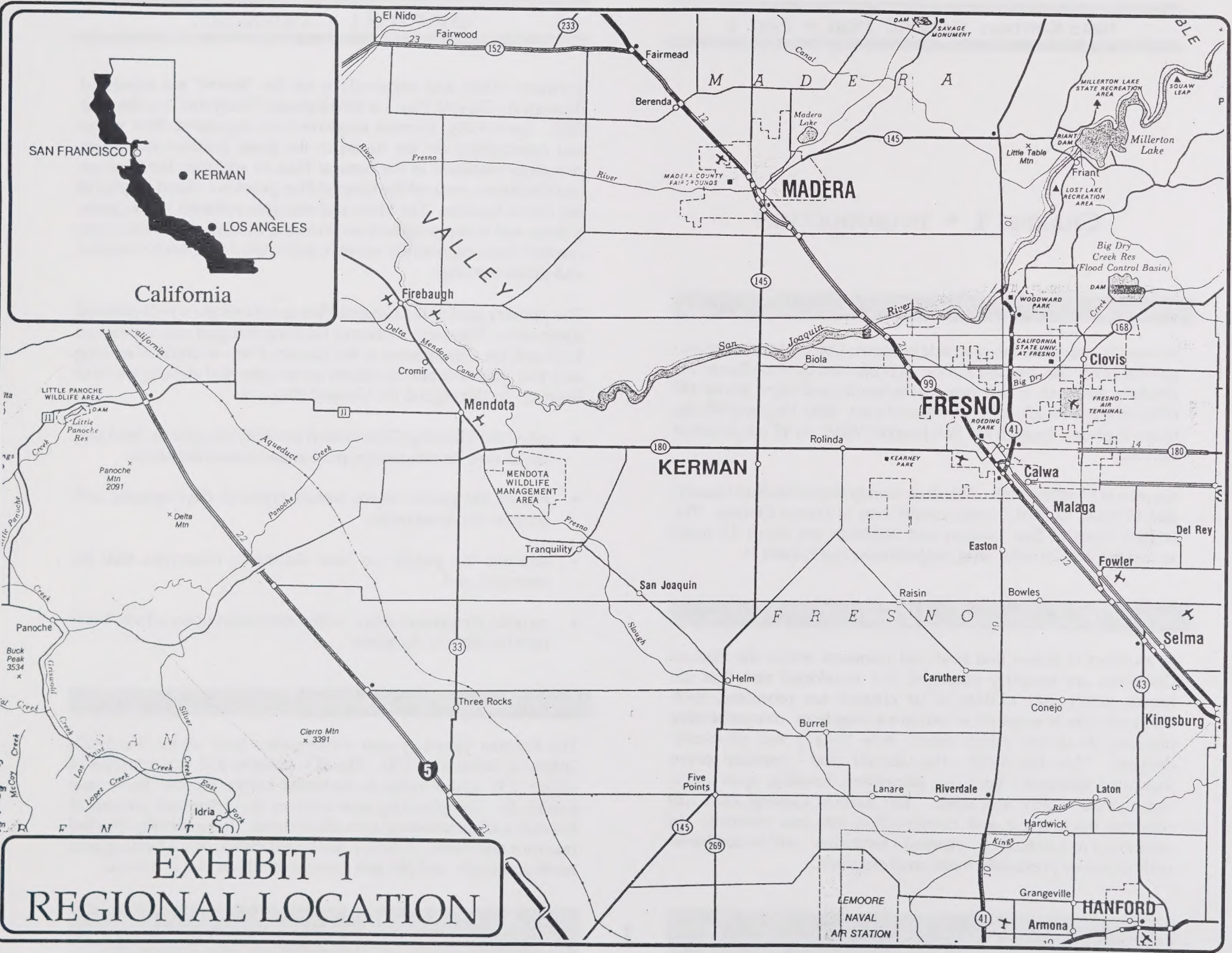


EXHIBIT 1
REGIONAL LOCATION

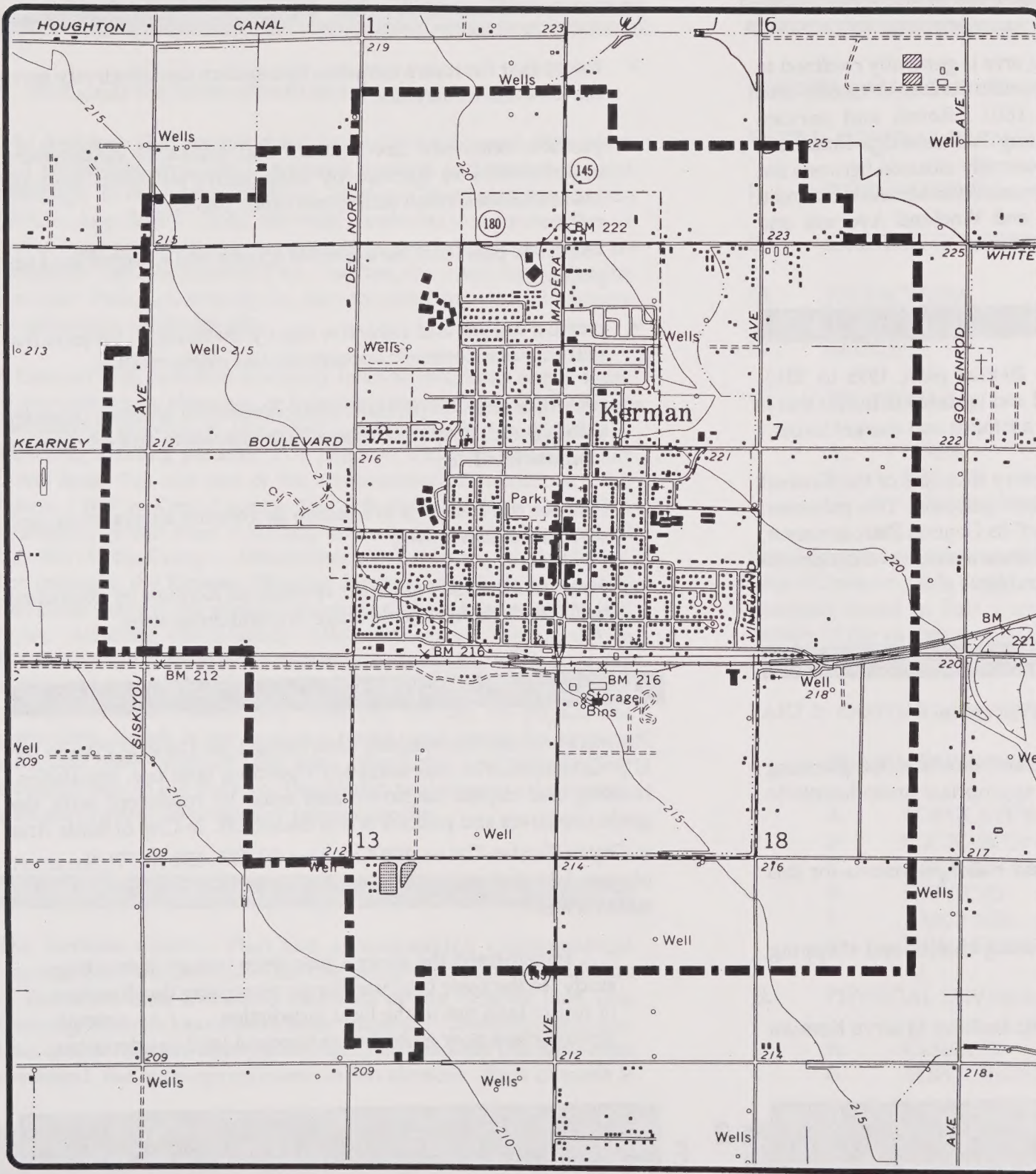
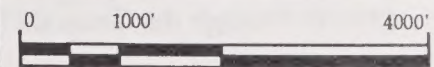


EXHIBIT 2

Planning Area

Base Map: Portion of Northeast quarter of the Kerman 15' Quadrangle published by United States Geologic Survey, 1963, revised 1981.

Kerman General Plan



500' 2000'

1 inch = 2,000 feet

--- PLANNING AREA
BOUNDARY



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The populated portion of the planning area is generally confined to the land between the Southern Pacific Railroad tracks and Whitesbridge Road (State Route 180). Retail and service commercial uses are concentrated along Whitesbridge Road and Madera Avenue; industrial uses are generally situated between the Southern Pacific Railroad tracks and Jensen Avenue; and residential uses are located between Stanislaus and Vineland Avenues and between "A" Street and Whitesbridge Avenue.

PLANNING PERIOD

The Kerman General Plan will be a 20-year plan, 1993 to 2013. Every five years, it should be reviewed and updated to insure that it is reflective of changes in community attitudes and market forces.

State planning law permits the mandatory elements of the General Plan to be amended as often as four times per year. This provision in State law allows the city to "fine-tune" its General Plan; however, since the General Plan is a "public" document, any amendment should have the broad support of the public.

GENERAL PLAN OBJECTIVES

The objectives of the Kerman General Plan are to:

- recognize the changing conditions and trends in the planning area and market place and make appropriate amendments to the General Plan;
- project Kerman's future growth and make provisions for this growth through the General Plan;
- provide for a greater variety of housing choices and shopping opportunities;
- insure that there are adequate public facilities to serve Kerman in the future;

- insure that Kerman's infrastructure system can effectively serve the land use framework;
- promote economic development and enhanced employment opportunities in Kerman by designating sufficient land for industrial uses, retail stores, and office parks;
- recognize past land use approval actions and adopted land use policies;
- create a unique and attractive city by investing in projects that will enhance Kerman's appearance and marketability;
- provide a safe and pleasant environment and enhance property values throughout the community by avoiding and eliminating land use conflicts;
- enhance the character of Kerman by creating an improved and revitalized downtown;
- promote increased sales tax revenue in Kerman by providing sufficient land for a wide range of commercial uses.

LEGAL BACKGROUND

Planners and decision-makers have likened the General Plan to the U.S. Constitution in that decisions regarding land use, circulation, housing and capital improvements must be consistent with the goals, objectives and policies of this document. In *City of Santa Ana v. City of Garden Grove*, 100 Cal. App. 3d 521, 532 (1979), the court of appeal, in explaining California's general plan legislation in 1971, stated it has:

"... transformed the general plan from just an 'interesting study' to the basic land use charter governing the direction of future land use in the local jurisdiction As a result, general plans now embody fundamental land use decisions

that guide the future growth and development of cities."

City decisions that are not consistent with the General Plan place that jurisdiction in a legally tenuous position and subject to legal challenge. In *Friends of "B" Street . et. al. v. City of Hayward, et. al.*, 106 Cal. App. 3d 988 (1980), the court concluded that construction of public improvements (e.g. street projects, sewer lines, etc.) must be consistent with the General Plan. Further, the court stated that the General Plan essentially is the constitution for all future development within the city.

A General Plan, which is internally inconsistent, lacks one or more of the mandatory elements, or is lacking required information, can potentially prevent a city from issuing land use approvals, including building permits, zone changes, and subdivisions, if the Court finds that any one of the aforementioned conditions exist. (*Sierra Club v. Kern County*, 126 Cal. App. 3d 698, 704 (1981); *Resource Defense Fund v. County of Santa Cruz*, 133 Cal. App. 3d 800, 803 (1982); *Camp v. Mendocino*, 123 Cal. App. 3d 334 (1981)). For example, the Kerman Housing Element may include a policy that states that the city provide adequate sites for a range of housing types, including multi-family residential uses. The Land Use Element would have to be consistent with this policy by designating sufficient land area for this type of development. Another example of inter-element consistency involves the use of population projections, which is the basis for future land needs for housing units and other types of land uses. The Land Use and Housing Elements should use the same population projections in their needs analysis to avoid inter-element inconsistencies.

DOCUMENT ORGANIZATION

The Kerman General Plan and accompanying environmental impact report are combined into one document. Part 1 contains six of the seven state-mandated elements of the General Plan (the Housing Element has already been updated). These elements are: land use, circulation, noise, safety, and two elements that have been combined, the open space/conservation element. Each element is

generally formatted as follows:

PART 1: GENERAL PLAN ELEMENT

- I. INTRODUCTION
- II. EXISTING CONDITIONS
- III. PROJECTIONS
- IV. GOALS
- V. THE PLAN
 - A. ISSUE
 - B. POLICY
 - C. ACTION PROGRAM

Part 2 contains existing conditions (background information) on the City of Kerman. It is support information for the six general plan elements found in Part 1 and serves as the existing conditions section of the environmental impact report (EIR) contained in Part 3. It is formatted as follows:

PART 2: EXISTING CONDITIONS

- I. HUMAN ENVIRONMENT
 - A. POPULATION
 - B. SOCIO-ECONOMIC CONDITIONS
 - C. HOUSING CHARACTERISTICS
 - D. SERVICES
 - E. LAND USE
 - F. INFRASTRUCTURE
- II. PHYSICAL ENVIRONMENT
 - A. CLIMATE
 - B. TOPOGRAPHY

- C. SOILS
- D. GEOLOGY
- III. RESOURCES
 - A. SCENIC
 - B. AGRICULTURE
 - C. CULTURAL
 - D. BIOTIC
 - E. AIR QUALITY
 - F. WATER QUALITY
- IV. RISK OF UPSET
 - A. FLOODING
 - B. NOISE
 - C. SEISMIC

Part 3 of this document contains the environmental impact report (EIR) prepared for the Kerman General Plan. This part of the document discusses the environmental impacts associated with the implementation of the General Plan. In addition, it lists mitigation measures and discusses plan alternatives that can reduce the General Plan's impact on the environment.

PART 3: ENVIRONMENTAL IMPACT REPORT

- I. EXECUTIVE SUMMARY
- II. INTRODUCTION
- III. PROJECT DESCRIPTION
- IV. ENVIRONMENTAL SETTING (see PART 2)
- V. ENVIRONMENTAL IMPACT ANALYSIS
- VI. UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

- VII. ALTERNATIVES TO THE PROPOSED ACTION
- VIII. GROWTH-INDUCING IMPACTS
- IX. LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT
- X. CUMULATIVE IMPACTS
- XI. EFFECTS FOUND NOT TO BE SIGNIFICANT
- XII. PERSONS AND AGENCIES CONSULTED

LAND USE ELEMENT

CHAPTER 2 • LAND USE

INTRODUCTION

The Land Use Element is the most prominent of the seven mandatory elements of the General Plan. It, more so than the other elements, has the most significant impact on existing and future Kerman residents. It is the element that determines the general location of residential, commercial, industrial, public and open space uses. It also discloses building intensities and population densities for the planning area.

The Kerman Land Use Element contains seven primary components:

- 1) existing conditions and projections;
- 2) projections;
- 3) land use designations and population densities;
- 4) land use goals;
- 5) the Plan - issues, policies and action programs;
- 6) land use designation/ zoning district matrix; and
- 7) a land use map.

EXISTING CONDITIONS

In addition to the information contained in this chapter, information on existing conditions in Kerman is also contained in Part 2 of this document.

Land Use

The original Kerman township was laid out within the area bounded by California Avenue, "G" Street, First Street and Ninth Street. The township was plotted in the early 1900's. Madera Avenue was designed to serve as Kerman's "main street". Originally, it had a right-of-way that ranged from 100 to 200 feet in width, with 30 x 140-foot commercial lots fronting onto it. At the southern end of Madera Avenue, a 100-foot landscaped plaza was constructed. It still exists today and contains a mature grove of palm, magnolia and ash trees surrounded by a lawn.

Residential lots, which were located east and west of Madera Avenue, were 50 x 140 feet. They fronted onto local streets, which had a right-of-way of 60 feet. Separating each residential block was a 20-foot alley, which bisected each block north and south.

Today, Kerman's urban area is centered roughly at the intersection of Kearney Boulevard and Madera Avenue. This intersection divides the city into four quadrants.

The urbanized portion of Kerman extends from Church Avenue on the south to north of Whitesbridge Road, and from east of Vineland Avenue to Siskiyou Avenue on the west. Commercial and office uses are clustered along Madera Avenue from California Avenue to north of Whitesbridge, and along Whitesbridge Avenue on both sides of Madera Avenue. Two large shopping centers are located on the northwest and southwest corners of Madera Avenue and Whitesbridge Road.

Single family residential neighborhoods are located in all four quadrants of the city. Multiple family development is also found in all quadrants of the city, however, three larger complexes are found

at California and Vineland Avenue, Whitesbridge and First Street and on Whitesbridge Road, east of Madera Avenue. Almost all mobilehomes within Kerman are located at the 106-unit Golden West Mobilehome Park on Madera Avenue, south of Whitesbridge.

Industrial uses are primarily located in the southern one-third of the city. Smaller operations are distributed along California Avenue, adjacent to the Southern Pacific Railroad tracks. Larger industrial developments are located south of the tracks, within the Kerman Industrial Park.

Public and quasi-public (churches) uses are scattered throughout the community. Public uses include schools, parks, city hall, county library, and the wastewater treatment plant.

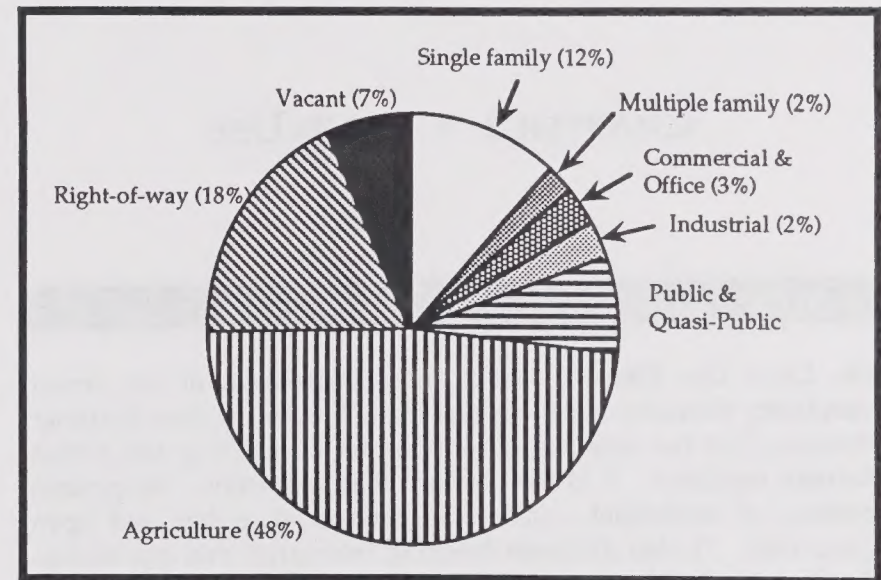
Table 1 and Table 2 provide a breakdown of the land uses in the planning area.

TABLE 1
PLANNING AREA LAND USE, 1993

<u>Land Use</u>	<u>Acres</u>	<u>Lots</u>	<u>Residential Units</u>
Single family	277	1,203	1,223
Multiple family	45	64	612
Mobile home park	11	1	93
Office	6	19	
Retail commercial	49	53	
Service commercial	19	22	6
Industrial	57	9	3
Public	153	38	
Quasi-public	17	25	
Agriculture	1,145	57	
Vacant	164	149	
Right-of-way	431		
Total	2,374	1,640	1,937

Source: Collins & Associates, 1993

TABLE 2
PLANNING AREA LAND USE, 1993



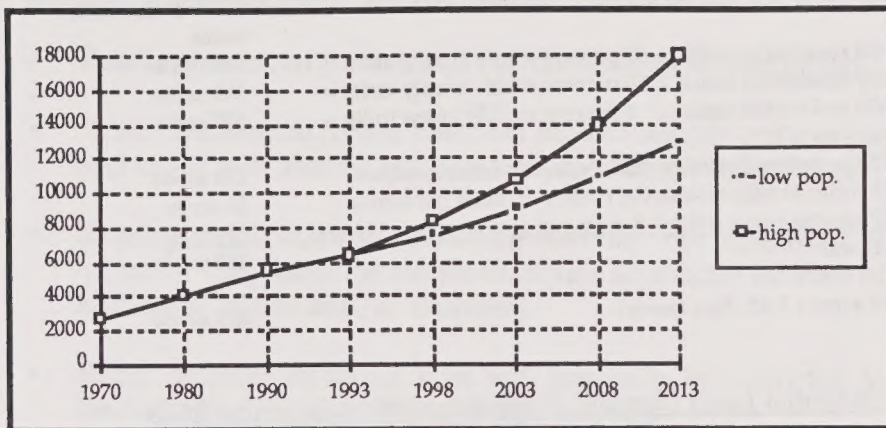
Source: Collins & Associates, 1993

PROJECTIONS

Population Projections

In order to determine the amount of land needed for development in Kerman over the 20-year planning period, population projections are required. Two population projections - low and high - for the years 2003 and 2013 are displayed below in Table 3. These population figures are projections from 1993 to the years 2003 and 2013. The "low" population projection is based on Kerman's average annual growth rate from 1980 to 1990 (3.61 percent) using U.S. Census figures. The "high" population projection is based on Kerman's average annual growth rate from 1980 to 1993 (5.35 percent) using U.S. Census and State Department of Finance figures.

TABLE 3
POPULATION PROJECTIONS, 2003 AND 2013



Source: U.S. Census 1970, 1980, and 1990; State Depart. of Finance; Collins & Associates, 1993

TABLE 4
POPULATION PROJECTIONS

Year	1970	1980	1990	1993	1998	2003	2008	2013
low pop.	2,667	4,002	5,448	6,323	7,550	9,014	10,763	12,851
high pop.	2,667	4,002	5,448	6,323	8,205	10,648	13,818	17,931

Source: U.S. Census 1970, 1980, and 1990; State Depart. of Finance; Collins & Associates, 1993

Land Demand Projections

Land demand projections for 2003 and 2013 are based on the population projections contained in the tables above and factors described below. Table 5 identifies a range of land demand acreages, based on low and high population projections, required for development and public uses by the years 2003 and 2013.

TABLE 5
LAND DEMAND PROJECTIONS, 2003 AND 2013

Land Use Designation	1993 to 2003		2004 to 2013		Total Acres	
	low	high	low	high	low	high
Single family	131	211	187	355	318	566
Multiple family	16	26	23	43	39	69
Mobile Home	8	13	12	23	20	36
Retail commercial/office	37	37	72	72	109	109
Industrial/service commercial	40	40	86	86	126	126
Parks	18	18	22	22	40	40
Schools	12	12	32	32	44	44
Total Acres	262	357	434	633	696	990

Source: Collins & Associates, 1993

Note: Quasi-public uses will most likely be located on lands designated for residential uses; public uses on lands designated for residential, retail commercial or office uses.

Kerman will need between 696 and 990 acres for future development and public uses according to Table 5. The Land Use Element designates more than 990 acres for these uses because for residential uses, it provides for a 125 percent flexibility factor. For example, instead of providing 566 acres of land for single family residential purposes, the Element designates 707 acres for single family development ($1.25 \times 566 = 707$). This flexibility factor for residential uses insures that the local real estate market does not become overly restricted thereby artificially inflating land prices and housing costs.

RESIDENTIAL LAND PROJECTIONS

Residential land demand factors

- The number of persons per residential unit will be 3.23 persons (1990 Census).
- Sixty-three percent of the new residential units will be single family dwellings, 29 percent multi-family units, and 8 percent

mobile homes. (1990 Census)

- Single family developments will have a gross density of 4 units per acre; multi-family development, 15 units per acre; and mobile homes, 9 units per acre. (Collins & Associates, 1993 Land Use Survey)
- The residential land demand projections for 2003 and 2013 shall be increased by a factor of 25 percent so as to insure that the residential real estate market does not become overly restricted, thus forcing up land prices, and also to insure that residential in-fill is encouraged, thus minimizing urban sprawl and premature urbanization of agricultural land.

Residential Land Demand, Low Population Estimate, 2003

9014 (2003 estimated population) - 6323 (1993 population) =	2691 persons
2691 persons / 3.23 persons per residential unit +	833 residential units
833 residential units x 63 percent single family units =	525 units
833 residential units x 29 percent multi-family units =	242 units
833 residential units x 8 percent mobile home units =	67 units
525 single family residential units / 4 units per acre =	131 acres
242 multi-family residential units / 15 units per acre =	16 acres
<u>67 mobile home units / 8 units per acre =</u>	<u>8 acres</u>
subtotal	155 acres
155 acres x 1.25 (flex-factor)	194 acres

Residential Land Demand, Low Population Estimate, 2013

12851 (2013 estimated population) - 6323 (1993 population) =	6528 persons
6528 persons / 3.23 persons per residential unit =	2021 units
2021 residential units x 63 percent single family units =	1273 units
2021 residential units x 29 percent multi-family units =	586 units
2021 residential units x 8 percent mobile home units =	162 units
1273 single family residential units / 4 units per acre =	318 acres
586 multi-family residential units / 15 units per acre =	39 acres
<u>162 mobile home units / 8 units per acre =</u>	<u>20 acres</u>
subtotal	377 acres
377 acres x 1.25 (flex-factor)	472 acres

Residential Land Demand, High Population Estimate, 2003

10648 (2003 estimated population) - 6323 (1993 population) =	4325 persons
4325 persons / 3.23 persons per residential unit =	1339 residential units
1339 residential units x 63 percent single family units =	843 units
1339 residential units x 29 percent multi-family units =	388 units
1339 residential units x 8 percent mobile home units =	107 units
843 single family residential units / 4 units per acre =	211 acres
388 multi-family residential units / 15 units per acre =	26 acres
<u>107 mobile home units / 8 units per acre =</u>	<u>13 acres</u>
subtotal	250 acres
250 acres x 1.25 (flex-factor)	312 acres

Residential Land Demand, High Population Estimate, 2013

17931 (2013 estimated population) - 6323 (1993 population) =	11608 persons
11608 persons / 3.23 persons per residential unit =	3594 residential units
3594 residential units x 63 percent single family units =	2264 units
3594 residential units x 29 percent multi-family units =	1042 units
3594 residential units x 8 percent mobile home units =	288 units
2264 single family residential units / 4 units per acre =	566 acres
1042 multi-family residential units / 15 units per acre =	69 acres
<u>288 mobile home units / 8 units per acre =</u>	<u>36 acres</u>
subtotal	671 acres
671 acres x 1.25 (flex-factor)	839 acres

These residential land demand projections indicate that Kerman will need between 194 and 312 acres of land for residential development by 2003 and between 472 and 839 acres by 2013.

RETAIL/COMMERCIAL LAND PROJECTIONS

Retail commercial/office land demand factors

- Retail commercial /office uses will continue to be intermixed.
- Retail commercial/office uses will replace service commercial and residential uses on Madera Avenue as land values increase.
- Existing retail commercial/office uses are not operating at capacity. They have the ability to serve a significant number of additional clients and/or shoppers.
- Retail commercial/office uses will generally be restricted to lands on Madera and Whitesbridge Avenues.
- Office uses may be located in residential neighborhoods on a limited basis.
- New retail commercial/offices will be one-story buildings.
- Kerman will continue to be a regional shopping/office center for western Fresno County.
- There are 54 acres of existing retail commercial/office uses in Kerman in 1993.

Retail commercial/office land demand, high population estimate, 2003

54 acres of retail/office (1993)/ 6323 (1993 population) = 1 acre retail/office per 117 persons

1 acre of retail/office per 117 persons x 10648 (2003 population, high estimate) = 91 acres retail/office needed

91 acres retail/office needed - 54 acres of existing retail/office = 37 acres retail/office needed

- 37 acres of retail/office needed by 2003

Retail commercial/office land demand, high population estimate, 2013

54 acres of retail/office (1993)/ 6323 (1993 population) = 1 acre retail-office per 117 persons

1 acre of retail/office per 117 persons x 17931 (2013 estimated population) = 163 acres retail/office needed

163 acres retail/office needed - 54 acres of existing retail/office = 109 acres

- 109 acres of retail/office needed by 2013

These retail/office land demand projections indicate that Kerman will need about 37 acres of additional land for retail/office development by 2003 and an additional 109 acres by 2013.

INDUSTRIAL/SERVICE COMMERCIAL LAND PROJECTIONS

Industrial/service commercial land demand factors

- The service commercial sector (commercial services like automobile repair, warehousing, and light manufacturing) of the economy will grow faster than the industrial sector (manufacturing uses).
- Industrial/service commercial uses do not require the high visibility that retail commercial/office uses require.
- Existing service commercial uses are not operating at capacity. They have the ability to serve a significant number of additional clients.
- Service commercial uses will generally be restricted to lands on Whitesbridge Avenue, east of Madera, and on the south side of California.

- Industrial uses will generally be restricted to lands south of California and north of Jensen; ample land (241 acres) is currently zoned for industrial uses.
- There are 69 acres of existing industrial/service commercial uses in Kerman in 1993.

Industrial/service commercial land demand, high population projection, 2003

69 acres of industrial/service commercial lands (1993)/ 6323 (1993 population) = 1 acre industrial-service commercial per 92 persons

1 acre of industrial/service commercial per 92 persons x 10648 (2003 estimated population) = 109 acres industrial/service commercial needed

109 acres industrial/service commercial needed - 69 acres of existing industrial/service commercial uses = 40 acres of land needed for industrial/service commercial uses

- 40 acres of industrial/service commercial uses needed by 2003

Industrial/service commercial land demand, high population projection, 2013

69 acres of industrial/service commercial lands (1993)/ 6323 (1993 population) = 1 acre industrial/service commercial per 92 persons

1 acre of industrial/service commercial per 92 persons x 17931 (2013 estimated population) = 195 acres industrial/service commercial needed

195 acres of industrial/service commercial uses needed by 2013 - 69 acres industrial/service commercial uses occupied in 1993 = 126 acres of land needed by 2013

- 126 acres of industrial/service commercial uses needed by 2013

These land demand projections indicate that Kerman will need about 40 acres of land for industrial/commercial uses by 2003 and an additional 126 acres by 2013.

PARK LAND PROJECTIONS

Parkland demand factors

- The City of Kerman has a standard of providing three acres of parkland for every 1000 persons.
- Open space at school sites will not be counted as parkland.
- Private parks will not be factored into Kerman's standard of three acres of parkland for every 1000 persons.
- There are 14 acres of existing park land in 1993.

Parkland demand, high population projection, 2003

Three acres of parkland/1000 persons x 10,648 (2003 estimated population) = 32 acres of parkland needed

32 acres of parkland needed - 14 acres of parkland in 1993 = 18 acres

- 18 acres of parkland needed by 2003

Parkland demand, high population projection, 2013

Three acres of parkland/1000 persons x 17,931 (2013 estimated population) = 54 acres of parkland needed

54 acres of parkland needed by 2013 - 14 acres of parkland in 1993 = 40 acres

- 40 acres of parkland needed by 2013

SCHOOL LAND PROJECTIONS

School land demand factors

- The Kerman Unified School District shall have a standard for elementary schools that provides for an enrollment of 600 to 700 students and a school site ranging from 10 to 12 acres.
- The Kerman Unified School District shall have a standard for middle schools that provides for an enrollment of 750 to 900 students and a school site ranging from 18 to 20 acres.
- The Kerman Unified School District shall have a standard for high schools that provides for an enrollment of 1500 to 2000 students and a school site of 40 acres or more.
- Elementary school sites should be within walking distance of the students they are to serve; all sections of Kerman should be effectively served by elementary schools.
- Middle school sites should be within walking distance of the students they are to serve; all sections of Kerman should be effectively served by middle schools.
- In 1993, Kerman Unified had 989 students enrolled in Kerman-Floyd Elementary, 900 in Sun Empire Elementary, 500 in Kerman Middle School, and 752 in Kerman High School.

School land demand, 2003

One elementary school site needed (12 acres per elementary school site) = 12 acres

- 12 acres of school facilities needed by 2003

School land demand, 2013

One junior high school site needed by 2013 (20 acres per junior high school site) = 20 acres

Two elementary school sites needed by 2013 (12 acres per elementary school site) = 24 acres

- 44 acres of school facilities needed by 2013

LAND USE DESIGNATIONS AND POPULATION DENSITIES

The land use designations contained on the Kerman land use map are described below. In addition, a maximum population density and generalized location criteria is described for each designation.

Residential

Very Low Density - a maximum of two dwelling units per gross acre, or eight persons per acre. Development in this category may not be required to install sidewalks, curbs/gutters or street lights, or connect to the city's waste water collection system. It will be required to connect to the city's water system.

This designation shall be reserved for those lands that are on the fringe of the community, have already been divided into lot sizes that are one-half acre or larger, or are required to "buffer" an industrial, agricultural, or public use.

Low Density - a maximum of 9 dwelling units per gross acre, or 29 persons per acre. Development in this category shall be required to install sidewalks, curbs/gutters and street lights, and connect to the city's waste water collection and water systems.

This designation shall be reserved for those lands that contain single family dwellings and uses that are typically associated with single family neighborhoods, such as churches, day-care centers, community centers, parks, and schools.

Medium Density - a maximum of 12 dwelling units per gross acre, or 39 persons per acre. Development in this category could encompass a mix of single family and multi-family uses, which could include duplex, tri-plex, four-plex units and mobile home

parks.

Each quadrant of the community will contain land that is designated for this type of residential development. This action will insure that each quadrant of the community has a mix of housing types.

High Density - a maximum of 20 dwelling units per gross acre, or 61 persons per acre. Development in this category could encompass apartment complexes, senior citizen projects and condominiums.

This designation will be applied to lands near, but not directly on, Madera and Whitesbridge Avenues.

Office

An office designation shall be reserved for those areas of Kerman that contain single family dwellings that could be converted to office uses at some future date and for those areas along Whitesbridge Avenues that should be reserved for office uses only.

When this designation is applied to lands that contain single family dwellings, these units should be adjacent to commercial uses, should have alley access, and should be in a neighborhood that is in transition.

Lands designated for office shall be required to comply with the design standards of Kerman Zoning Ordinance's design districts.

Commercial

Regional - commercial shall be reserved for lands at the intersection of Madera and Whitesbridge Avenues. Specifically, a 20-acre parcel of land should be reserved for a regional shopping center site, which could include a K-Mart, Wal-Mart or Target type of facility

Development with this designation will have the following distinguishing features - the buildings sites will be required to be

landscaped, parking shall be constructed off-street, signs shall be regulated and new uses or extensive expansion of existing uses shall undergo site plan review.

Lands designated regional commercial shall be required to comply with the design standards of the Kerman Zoning Ordinance's design districts.

General - commercial shall be reserved for properties generally located on both sides of Madera and Whitesbridge Avenues. This designation shall provide for shopping centers, retail uses, and offices.

Development with this designation will have the following distinguishing features - the building sites will be required to be landscaped, parking shall be constructed off-street, signs shall be regulated and new uses or extensive expansion of existing uses shall undergo site plan review.

Lands designated general commercial shall be required to comply with the design standards of the Kerman Zoning Ordinance's design districts.

Service - commercial shall be reserved for properties generally located south of California Street (A Street) and the Southern Pacific Railroad. This designation shall provide for uses that include a mix of light industrial and heavy commercial uses. Certain properties north of Whitesbridge Avenue east of Madera will also be designated for service commercial but will be reserved for auto, mobilehome, boat and motorcycle dealerships.

Development with this designation will have the following distinguishing features - the buildings will have front yard landscaping, parking shall be off-street, all visible equipment and storage areas shall be fenced and screened from public view, lighting shall not be allowed to illuminate surrounding properties, signs will be regulated and new uses or extensive expansion of existing uses shall undergo site plan review.

Lands designated service commercial shall be required to comply with the design standards of the Kerman Zoning Ordinance design districts.

Neighborhood - commercial sites shall be reserved for two areas in Kerman. Site one shall be located near the intersection of Kearney Boulevard and Siskiyou and site two near the intersection of Kearney Boulevard and Vineland Avenue. These sites shall not exceed three acres in size and shall not be developed until 2003. Permitted uses will include grocery stores, video stores, laundromats, and food service establishments.

Development with this designation will have the following distinguishing features - the building site will have extensive landscaping, parking shall be off-street and shall be landscaped, signs shall be regulated, the architectural design of the building will be compatible with adjacent residential dwellings, and new uses shall undergo site plan review.

Mixed Use

A mixed-use designation will allow for a combination of residential, office and commercial uses. This designation shall generally be reserved for sites that are centrally located, have good access and will not conflict with existing land uses. One such site is located at the southwest corner of Madera Avenue and Kearney Boulevard. Lands designated for mixed uses shall be required to comply with the design standards of the Kerman Zoning Ordinance's design districts.

Industry

Lands designated for industrial development will generally be located south of the Southern Pacific Railroad and north of Jensen Avenue. This designation will provide for uses that are involved in manufacturing, processing, warehousing, and certain service commercial uses.

Development with this designation will have the following

distinguishing features - the subject site will be landscaped, parking lots will be constructed off-street and will be landscaped, storage areas shall be fenced and screened, signs shall be regulated and new uses shall undergo site plan review.

Public Facilities

This designation is reserved for facilities that are frequented by the public, including schools, the post office, city hall, and county offices.

Development with this designation will have the following distinguishing features - the subject site will be landscaped, parking lots will be constructed off-street and will be landscaped, signs shall be regulated and new uses shall undergo site plan review. Schools will receive special attention in regards to pedestrian, bike and bus circulation.

Open Space

This designation is applied to lands that will remain generally free of buildings. Uses that would receive this designation would include parks, water courses, environmentally sensitive lands, and scenic corridors.

Agriculture

This designation is applied to lands that are being, or have the capacity to be, actively farmed. Further, this designation could also be applied to lands that contain agriculturally-related uses, such as packing houses, dairies, and other livestock operations.

The purpose of this designation is to protect agriculture from urban encroachment, maintain land in agriculture until the time is appropriate for conversion to urban uses, and to insure that conflicts do not arise between agriculture and urban uses.

LAND USE GOALS

Land use goals express general community values. They are a vision for the future. They can refer to image and appearance, economic viability, health and safety, preservation of resources, or fiscal soundness. Land use goals for Kerman are as follows:

1. ENHANCE THE IDENTITY AND IMAGE OF KERMAN AND PRESERVE ITS CENTRAL CALIFORNIA CHARACTER
2. PROTECT THE HEALTH, SAFETY AND WELFARE OF RESIDENTS BY INSURING THAT KERMAN IS WELL - PLANNED
3. EXPAND AND DIVERSIFY EMPLOYMENT IN KERMAN BY ATTRACTING ENVIRONMENTALLY CLEAN INDUSTRIES
4. PROTECT NATURAL RESOURCES IN KERMAN, INCLUDING PRIME AGRICULTURAL LAND AND AIR AND WATER QUALITY.
5. INCREASE RETAIL SHOPPING AND SERVICE COMMERCIAL OPPORTUNITIES IN KERMAN
6. PROVIDE A PUBLIC SERVICE SYSTEM THAT IS EFFICIENT AND ENHANCES THE 'QUALITY OF LIFE' IN KERMAN
7. PROVIDE AN INFRASTRUCTURE SYSTEM THAT IS EFFECTIVE AND COST-EFFICIENT IN TERMS OF SERVICING ORDERLY URBAN DEVELOPMENT
8. PROMOTE URBAN GROWTH PATTERNS AND LAND USE ARRANGEMENTS IN KERMAN THAT MINIMIZE LAND USE CONFLICTS
9. ENHANCE THE SCENIC QUALITY AND

ENVIRONMENTAL SETTING OF KERMAN

10. STRUCTURE AN ACTION PROGRAM THAT EFFECTIVELY AND FINANCIALLY IMPLEMENTS THE OBJECTIVES AND POLICIES OF THE LAND USE ELEMENT.
11. PRESERVE KERMAN'S SINGLE FAMILY RESIDENTIAL NEIGHBORHOOD ATMOSPHERE
12. ENHANCE KERMAN'S ABILITY TO ATTRACT LONG-TERM REVENUES TO THE CITY
13. CREATE A DOWNTOWN ATMOSPHERE IN KERMAN

THE PLAN - ISSUES, POLICIES AND ACTION PROGRAMS

The Plan covers a number of topics related to land use. For each land use topic, the Plan will identify and discuss community issues that relate to the topic, such as industrial development or neighborhood conservation. Second, it will identify policies that will guide future decisions regarding the specific land use topic. Third, the Plan will list various action programs that will be required in order to implement the policies.

A. COMMUNITY IMAGE

Image is important to a city because it can influence how residents feel about their community. A strong sense of community ownership, involvement and stewardship can result if people feel good about their city. Further, a city that is clean, well-maintained, visually appealing, and attentive in its arrangement of land uses, can attract outside investment, which generates employment, taxes, and further investment.

1. POLICY: Promote a clean, well-maintained community.

ACTIONS:

- a. The Planning Department shall periodically review improvement standards contained in the zoning and subdivision ordinances. Standards that should be reviewed include landscaping, parking and signs.
- b. The City shall actively enforce the city's vehicle abatement program.
- c. The Building Department shall actively enforce the State Housing Code to insure that unsafe, dilapidated residential structures are rehabilitated or demolished.
- d. The Planning Department shall increase its enforcement of the

sign ordinance by periodically informing persons with illegal signs that these signs must be removed.

- e. The City shall investigate purchasing and installing trash receptacles along Madera and Whitesbridge Avenues.
- f. The Planning Department shall insure that commercial uses do not operate in residential neighborhoods unless the operator of the commercial use has secured a home occupation permit.

2. POLICY: Visually enhance Kerman's four major entryways.

ACTION: The City shall beautify entryways into Kerman through installation of landscaping, sign treatment, landscaped medians, and lighting.

3. POLICY: Encourage high quality site, architectural, and landscape design in new private and public development.

ACTIONS:

- a. Kerman shall amend its zoning ordinance to add new development standards that are specific to design districts identified on the land use/circulation map.
- b. Continue the use of the site plan review process to ensure that new or renovated projects conform to the development standards contained in the zoning ordinance.

4. POLICY: Preserve and enhance Kerman's small-town character.

ACTIONS:

- a. Adopt specific development standards for the design district that encompasses the historic Kerman townsite, which extends along Madera Avenue from California Avenue to Kearney Boulevard. The standards shall focus on special setback, streetscape, sign and parking requirements.

b. Promote a mixed-use development at the southwest corner of Madera Avenue and Kearney Boulevard that exhibits a historical downtown character.

c. In addition to the Harvest Festival, Kerman should explore the idea of holding other public activities near Kerckhoff Park, such as a farmer's market, sidewalk sale, or ethnic food faire.

5. POLICY: Preserve and enhance Kerman's visual appearance and living environment.

ACTIONS:

a. Require that new subdivisions be required to install and maintain landscaping, irrigation, and wall improvements along collector and arterial roadway frontages.

b. Kerman shall investigate the feasibility of constructing and maintaining tree-lined medians along Madera Avenue, Kearney Boulevard, Whitesbridge Avenue, C Street or any other roadway that the City Council may deem appropriate.

6. POLICY: Develop and maintain a strong community edge - where urban and agricultural uses interface.

ACTIONS:

a. Kerman shall forward a recommendation of denial to Fresno County if large-lot (one acre or larger) ranchette subdivisions are proposed for lands within its sphere of influence.

b. Kerman shall not initiate annexations that create peninsulas or islands, or which require inefficient extensions of infrastructure.

7. POLICY: Preserve and enhance natural and rural features in Kerman such as stands of mature trees, and agricultural crops and trees.

ACTIONS:

a. Require developers to integrate existing mature trees into their projects.

b. Explore the feasibility of using rights-of-way for use as parkways and trails.

8. POLICY: Preserve the low density, single-family character of Kerman.

ACTIONS:

a. This policy will be accomplished through the implementation of the Land Use Element.

b. Designate older, established single family blocks for low density residential uses.

B. HISTORIC TOWNSITE

Kerman's original townsite was bounded by Kearney Avenue on the north, California Avenue on the south, First Street on the west and Ninth Street on the east. Kerman's original downtown, older neighborhoods, and first park is contained in this area. Most of Kerman's first commercial buildings were located in this area, along both sides of Madera Avenue. The original townsite has changed significantly since its formation in the early 1900s. Madera Avenue has been widened from a two lane road to a four lane highway with parking on both sides; many of the older commercial buildings have been demolished (Kerman Inn) or altered; and some of the older homes have been replaced with apartment units.

The policies and actions mentioned below will provide a strategy that will restore the character and appearance of Kerman's original townsite and will create a focal point for the community in regards to community events, shopping and recreation.

1. POLICY: Provide an area in the historic Kerman townsite for a planned mixed-use development. A primary location for such a project would be the vacant parcel at the southwest corner of Madera Avenue and Kearney Boulevard.

ACTIONS:

- a. Implement this policy by amending the Zoning Ordinance to add a mixed-use district.
- b. The Redevelopment Agency shall consider facilitating the development of downtown-type uses in the historic Kerman townsite and specifically, on the parcel of land designated for mixed-use development.

2. POLICY: Restore and enhance the "downtown" image in the historic Kerman townsite by upgrading the overall appearance and utility of the townsite with streetscaping, landscaping, public parking, signs, banners and facade improvements.

ACTIONS:

- a. Prepare and adopt an historic Kerman townsite design and improvement program.
- b. Remove graffiti as necessary.
- c. Provide additional street and parking lot lighting.
- d. Underground overhead utilities.
- e. Install street furniture and landscaping.
- f. Extend the historic Kerman Plaza north to E Street.

3. POLICY: The Redevelopment Agency shall encourage the development of special uses in the historic Kerman townsite, including a movie theater, restaurant, and specialty retail stores.

ACTIONS:

- a. The Redevelopment Agency may consider the following actions to entice the above mentioned uses to locate in the Kerman townsite. These actions could include a:

write-down in the cost of land,

- low interest loan for facade renovation,

- a sales tax rebate, or

- installation of streetscape improvements using funds from a revenue bond.

C. GROWTH MANAGEMENT

The management of Kerman's urban growth - direction, rate, density, and arrangement of land uses- can be beneficial from a fiscal, environmental, and social perspective. A community that is "well planned" is more likely to be better received by the public than one that is ill-planned, with numerous land use conflicts, leap-frog development, a non-viable downtown, poor circulation, is visually unappealing, lacks open space, or has disenfranchised sections of town.

The cost of providing infrastructure and public services is generally higher for a community that is sprawling and not compact, lacks contiguous development, and does not encourage infill or increased residential densities.

1. POLICY: Land uses in Kerman shall be arranged in a manner that avoids conflicts between the uses.

ACTIONS:

- a. Uses that conflict with each other shall be separated by buffer zones or demarcation lines (streets, railroads, canals, etc. to separate

uses of different characteristics).

b. This policy will be implemented through the adoption of the Noise Element.

2. POLICY: Kerman shall promote an urban pattern that is compact, contiguous and concentric to the historical Kerman townsite.

ACTION:

a. This policy will be implemented through adoption of the Land Use Element.

3. POLICY: The Land Use Element should include two growth boundary lines - 2003 and 2013.

ACTION:

a. Land outside each growth boundary line shall not be annexed into Kerman until more than 80 percent of the residentially designated land is developed in the city limits or until the boundary line year has been surpassed.

b. The City of Kerman shall petition LAFCO (Local Agency Formation Commission) to amend its Sphere of Influence (SOI) based on the land use patterns contained in the General Plan.

4. POLICY: The Redevelopment Agency shall encourage the development of downtown-type uses in the historical Kerman townsite.

ACTION:

a. The Redevelopment Agency shall explore the feasibility of financially assisting with the remodeling, reuse, or new construction of downtown-type uses in the historic Kerman townsite.

5. POLICY: Promote a mix of residential dwelling types on the east and west sides of Kerman as well as within each neighborhood.

ACTIONS:

a. This policy will be implemented through the adoption of the Land Use Element.

b. Encourage small-scale multiple family development (duplex and triplexes) in new residential neighborhoods. This type of development could be located on corner lots or in cul-de-sacs.

6. POLICY: New development should be contiguous to existing or approved development.

ACTIONS:

a. Require the Planning Commission and City Council to make a finding that new development is within 1/8 mile of existing or approved development when approving subdivisions.

7. POLICY: Promote infill development in order to reduce the rate at which surrounding agricultural land is urbanized and to provide for a more efficient use of existing infrastructure.

ACTIONS:

a. Implement an annexation policy that is based on only annexing land for residential development when at least 80 percent of the residentially designated land in the city limits is developed.

8. POLICY: Encourage a community land use pattern that will accommodate an efficient infrastructure and public service system.

ACTION:

a. This policy will be implemented through the adoption of the

Land Use Element, as well as conformance to the master water, sewage, and storm drainage plans.

D. RESIDENTIAL NEIGHBORHOODS

The "neighborhood" is the fundamental unit of a community. The health and quality of life of a community is best measured at the neighborhood level. If a community's neighborhoods are not quiet and free of excessive traffic, are unkempt, contain incompatible uses or are depreciating in value, then the community as a whole is most likely trending towards a state of deterioration. For the local decision-maker, preservation of the neighborhood ranks as one of the community's most important objectives.

A city should provide for a wide range of housing types, styles, and prices. A city with these characteristics insures that housing opportunities are made available for all socio-economic levels. Further, certain types of housing - single family dwellings or apartments - should not be restricted to only certain areas in the community. To do so, can lead to a stigma being attached to certain parts of town (e.g. "good" side of town versus "bad" side of town).

1. POLICY: Single family development shall be well-designed and well-maintained.

ACTIONS:

- a. New subdivisions shall form a landscape and lighting district to maintain improvements in these areas.
- b. Generally, for every forty lots of a new residential neighborhood, a neighborhood subdivision park shall be provided. This park shall be maintained through a landscaping and lighting district and could include benches, drinking fountain, playground equipment and a landscaped area.
- c. Prohibit residential driveways from entering onto collector and arterial streets from new subdivisions. This policy will be

implemented during the subdivision review process.

d. Perimeter walls around new subdivisions shall contain openings in order to facilitate through bike and pedestrian traffic. The Kerman Improvements Manual shall be amended to incorporate a standard for this type of wall opening.

e. Subdivisions that are required to provide neighborhood subdivision parks shall be processed as a Planned Residential Development Combining District. In order to facilitate the installation of a neighborhood subdivision park, the City will entertain the creation of residential lots that are less than the minimum lot size of the underlying residential zone district.

2. POLICY: Promote a residential living environment that is safe, sanitary and furnishes housing opportunities for all socio-economic levels.

ACTIONS:

- a. Abate or rehabilitate dilapidated residential dwellings through the process described in the State Housing Code.
- b. Rehabilitate substandard residential dwelling units.
- c. Encourage private developers to utilize state and federal housing funds in order to construct low- to moderate- income housing.
- d. Continue to implement the goals, objectives and policies contained in the Housing Element.

3. POLICY: Provide for an adequate amount of land for residential uses so that the real estate market does not become overly restrictive thereby causing land values to increase.

ACTION:

- a. This policy will be achieved through implementation of the Land Use Element and adoption of the Land Use Map.

4. **POLICY:** Enhance Kearney's boulevard effect by designating portions of its frontage for very low density residential.

ACTIONS:

a. This policy will be achieved through the implementation of the Land Use Element and adoption of the Land Use map.

E. MULTI-FAMILY DEVELOPMENT

Multi-family development, known commonly as apartments, is necessary in all communities. It provides housing for persons who do not wish to own a single family dwelling and for persons who can not afford to rent or own one. Improperly located, designed or maintained multi-family development can have an adverse impact on surrounding land uses, especially single family dwellings. To protect the health, safety and welfare of persons living adjacent to multi-family development as well as persons living in these types of units, the location, design and long-term maintenance of these types of residential use must be well planned.

1. **POLICY:** Multiple family development shall be well-designed, well-maintained, and properly sited.

ACTIONS:

a. Multiple family development with ten units or more shall be located where two collector streets intersect.

b. The number of multiple family units on any given site shall be limited to 30 units.

c. Review the Zoning Ordinance standards for multiple family development focusing on revisions which will result in higher quality multiple family development, including the following standards:

- Apartment units along major roadways should be

staggered.

- Parking lots shall be landscaped so that within ten years, 50 percent of the lot will be shaded.
- On-street parking by residents or guests should be discouraged.
- Parking and trash enclosures should be screened from the view of persons traveling on adjacent streets or residing on adjacent properties.
- Landscaping along street frontages should include a combination of trees, shrubs and turf.
- Two or more story multi-family projects should not have upper story windows on the side of the building that faces adjacent single family dwellings unless sufficient setbacks exist that prevent over-view from the upper story units.

d. High density residential designations shall not be applied to parcels larger than three acres. This action will be accomplished through the implementation of the Land Use Element and adoption of the Land Use Map.

e. Not more than two corners of a given intersection shall be designated for multi-family development.

f. Duplex units may be integrated into single family residential subdivisions if the overall density of the development does not exceed the density of the underlying residential zone district.

F. OFFICE DEVELOPMENT

Office development in a city is almost as important to the economic well-being of a city as industrial development. Offices support a source of employment, which on average, has wages that are higher than those of agriculture. For Kerman, whose economy is primarily

based on agriculture, office development provides an excellent opportunity to diversify its economy.

Four general areas in Kerman are designated for office development by the Land Use Element. For larger offices, land along Whitesbridge Road west of Madera Avenue is designated for office development. These office complexes would be required to conform to design district standards proposed for development along Whitesbridge Road.

The second area that allows office development is Madera Avenue. Although the Land Use Element designates this area for general commercial uses, the Kerman Zoning Ordinance lists offices as a permitted use. Land uses constructed along Madera Avenue would be required to conform to the design standards prescribed for this commercial area.

The third area where offices are encouraged is the parcel of land designated Mixed-Use, located at the southwest corner of Madera Avenue and Kearney Boulevard. The Land Use Element encourages a mix of urban uses at this location - residential, office and commercial. Land uses constructed at this site would be required to conform to the design standards prescribed for the original historic townsite area.

The fourth area where offices are encouraged is land immediately east and west of Madera Avenue between California Street and "E" Street. This is an area where older homes that back onto commercial uses along Madera Avenue could be converted to office uses. The rear portion of lots in this area would be used for office parking; access would be provided from an alley.

1. POLICY: Provide for the establishment of offices in existing residential structures, adjacent to Madera Avenue in the original historic townsite.

ACTIONS:

- a. Adoption of the Land Use Element will implement this policy.

- b. The City Planner will insure that residential structures that are being converted to offices are designed to be compatible with the local residential neighborhood. Parking for these offices shall be provided off the alley.

G. COMMERCIAL DEVELOPMENT

The Kerman Land Use Element provides for four basic types of commercial development - neighborhood, general, service and regional. Each of these types of commercial uses are required if the community wishes to provide services and shopping opportunities for its citizens. Further, in order for a city to have a strong sales tax base, it is imperative that the city not only retain its own shoppers but also attract shoppers from surrounding cities and outlying rural areas.

For each type of commercial development to be successful, the use must be properly located, have adequate access and be designed in a manner which is attractive to clients. For example, a parcel of land that is designated for regional uses should be located at the intersection of two arterial roadways, it should be designed so that it is attractive and visible from each roadway and it should incorporate ample off-street parking.

1. POLICY: Ensure that neighborhood commercial sites are properly located and designed so that they meet the needs of the neighborhood and do not negatively impact adjacent residential uses.

ACTION:

- a. Adoption of the Land Use Map will implement this policy.
- 2. POLICY:** Neighborhood commercial centers shall not exceed three acres in size.

ACTION:

- a. Adoption of the Land Use Map will implement this policy.

3. POLICY: Neighborhood commercial centers shall not develop until after the year 2003 in order to insure that adequate infill has occurred along Madera Avenue.

ACTION:

- a. Neighborhood commercial centers have been designated on sites located outside the 2003 growth boundary line.

4. POLICY: Maintain land at the intersection of Madera and Whitesbridge for regional commercial uses.

ACTION:

- a. Adoption of the Land Use Map will implement this policy.
- b. The following uses will be incorporated into the Zoning Ordinance as Regional Commercial uses:
- Shopping centers (many shops contained within one building)
 - Department stores
 - Restaurants
 - Fast-food stores
 - Full-service service stores
 - Banks
 - Variety store
 - Hotels and motels
 - Food stores
 - Other uses added by the Planning Commission and City Council

5. POLICY: Ensure that land designated for regional commercial uses is properly designed, located and protected against incompatible uses so that it achieves its maximum development

potential.

ACTION:

- a. Adoption of the Land Use Element and Land Use Map will implement this policy.

- b. Amend the zoning ordinance to add a design district that covers the land along Whitesbridge Avenue that is designated for commercial or office uses.

- c. Amend the zoning ordinance to establish a minimum parcel size for parcels of land that are designated regional commercial.

- d. Master plans shall be prepared for lands designated for regional commercial uses. These master plans shall include but will not be limited to development details involving circulation, setbacks, signage, lighting, landscaping, infrastructure and fences/walls.

- e. Development on lands that are designated for regional commercial uses shall be processed as a Planned Commercial Development Combining District.

- f. Lands designated regional commercial shall be zoned to the general commercial zone district.

6. POLICY: Ensure that land designated for general commercial uses is properly designed, located and protected against incompatible uses so that it achieves its maximum development potential.

ACTION:

- a. Adoption of the Land Use Map will implement this policy.
- b. Amend the zoning ordinance to add a design district that covers the land along Madera Avenue from Kearney Boulevard to Whitesbridge Road that is designated for commercial uses.

c. Reduce the number of driveways along Madera Avenue in order to improve traffic flow along this roadway and enhance traffic safety.

7. POLICY: Encourage infill of vacant commercial properties and renovation of existing commercial structures along Madera Avenue.

ACTION:

a. The Redevelopment Agency should investigate the feasibility of using financial incentives to encourage building renovations and the infill of vacant lands along Madera Avenue. These incentives could involve facade renovation programs, land write-down, sales tax rebates, or defraying the cost of construction of off-site improvements.

8. POLICY: Service commercial uses shall be directed to locate south of California Avenue, near the industrial park and the Southern Pacific Railroad.

ACTIONS:

a. Adoption of the Land Use Map will implement this policy.

b. Amend the zoning ordinance to require service commercial uses in the General Commercial zone only with a Conditional Use Permit.

9. POLICY: Land north of Whitesbridge Road east of Madera Avenue shall be designated for service commercial uses with the special provision that it will be used for only auto, truck, boat, mobile home and motorcycle dealerships.

ACTION:

a. Adoption of the Land Use Element and Land Use Map will implement this policy.

10. POLICY: Ensure that adequate land is available for service commercial uses.

ACTION:

a. Adoption of the Land Use Map will implement this policy. A portion of Kerman's industrial park has been designated for service commercial uses.

H. INDUSTRIAL DEVELOPMENT

Industrial development generally provides the economic foundation for a city in that it is a source of employment and it provides a flow of revenue into the city from outside sources - other businesses buying raw materials or finished goods from the local industry.

Industries are typically poor neighbors because they can generate large volumes of truck traffic, they can produce noise and odors, and they can be unsightly. For these reasons, it is important that they be properly located in the community - away from land uses that are sensitive, such as schools, residential development and parks.

1. POLICY: New industrial uses shall be located south of California Avenue.

ACTION:

a. Adoption of the Land Use Element and Land Use Map will implement this policy.

2. POLICY: Discourage industrial uses that are high water users unless the industrial use can mitigate this adverse impact with appropriate fees.

ACTION:

a. The City Engineer shall review each industry to ensure that it does not adversely impact Kerman's sewer or water system.

3. POLICY: Discourage industrial uses that generate high strength waste water unless the industrial use can mitigate this adverse impact with appropriate fees or pretreatment of its waste water.

ACTION:

a. The City Engineer shall instruct industries that are generators of high strength waste water to pretreat their effluent prior to discharging into Kerman's waste water system.

4. POLICY: New industries will be reviewed to ensure that they do not conflict or interfere with surrounding uses or adversely affect the public's health, safety, or welfare.

ACTIONS:

a. The City shall revise the Zoning Ordinance to include performance standards to which new industrial uses would be required to comply with. Said standards for consideration include light and glare, vibrations, air quality, noise or odor.

I. AGRICULTURE

Agriculture is the primary industry in the Kerman area. This basic industry employs over 30 percent of Kerman's labor force. Agriculture is a relatively stable industry when compared to other industrial sectors, like manufacturing, tourism, and the transportation industries. For this reason, agriculture should be encouraged in the Kerman area. Further, land use policies that minimize the impacts between urban and agricultural uses should be promoted.

1. POLICY: Kerman will ensure that its primary economic base (agriculture) is protected.

ACTION:

a. Require the Planning Commission and City Council to make a finding when approving new subdivisions that this development is within 1/8 mile of existing urban development.

2. POLICY: Encourage Fresno County to apply large-lot agricultural zoning (20 acre minimum) to land within Kerman's Sphere of Influence.

ACTION:

a. The City of Kerman shall oppose any county development within its Sphere of Influence that creates parcels of land smaller than 20 acres.

3. POLICY: Increase overall residential densities in the City of Kerman so as to require less urbanization of surrounding agricultural lands.

ACTION:

a. The Land Use Element and Zoning Ordinance provide for increased residential densities within the planning area.

4. POLICY: Urban uses, to the best extent possible, should be separated from agricultural uses by streets, railroads, canals or similar man-made or natural barriers.

ACTION:

a. Adoption of the Land Use Element and Land Use Map will implement this policy.

J. PUBLIC FACILITIES

Construction of public facilities benefits a city in that the facility provides additional employment and the location of the facility can be used to renovate a section of the city. For example, a county facility, such as a court, library or health clinic, built in or near a downtown brings additional people into the area that will shop and eat, thereby enhancing the business or commercial operations in the downtown.

1. POLICY: Future public facilities and expansions of existing public facilities (City Hall) should be encouraged to locate in the historic Kerman townsite.

ACTION:

a. The City/Redevelopment Agency shall work with various public agencies to encourage them to locate their facilities in this area.

b. The City should explore the feasibility of purchasing land south of the existing city hall for future expansion for city buildings.

2. POLICY: The City should preclude the intrusion of any land uses that are incompatible with operation of the Kerman Waste Water Treatment Plant.

ACTION:

a. Adoption of the Land Use Map will implement this policy.

3. POLICY: New public facilities (ie: parks, schools, etc.) should be located in areas convenient to all citizens.

ACTION:

a. Adoption of the Land Use Element and Land Use Map will implement this policy.

4. POLICY: Kerman shall install water, sewer, and storm drainage

improvements that correct existing infrastructure deficiencies and meet the demand of future growth.

ACTION:

a. Kerman's water, sewer, and storm drainage master plans shall be reviewed in order to insure that they can properly and efficiently serve future development provided for by the Land Use Element.

b. Kerman's water, sewer, and storm drainage development fees shall be reviewed on an annual basis. This review should focus on the relationship between the amount of fees being collected for each system and the future capital needs of each system based on development trends in Kerman.

LAND USE DESIGNATION/ZONING DISTRICT MATRIX

Table 6 below details which zone districts are consistent with the land use designations contained in the Kerman Land Use Element. This matrix will be valuable to the Planning Department as they begin the rezoning of the community to be consistent with the adopted Land Use Element.

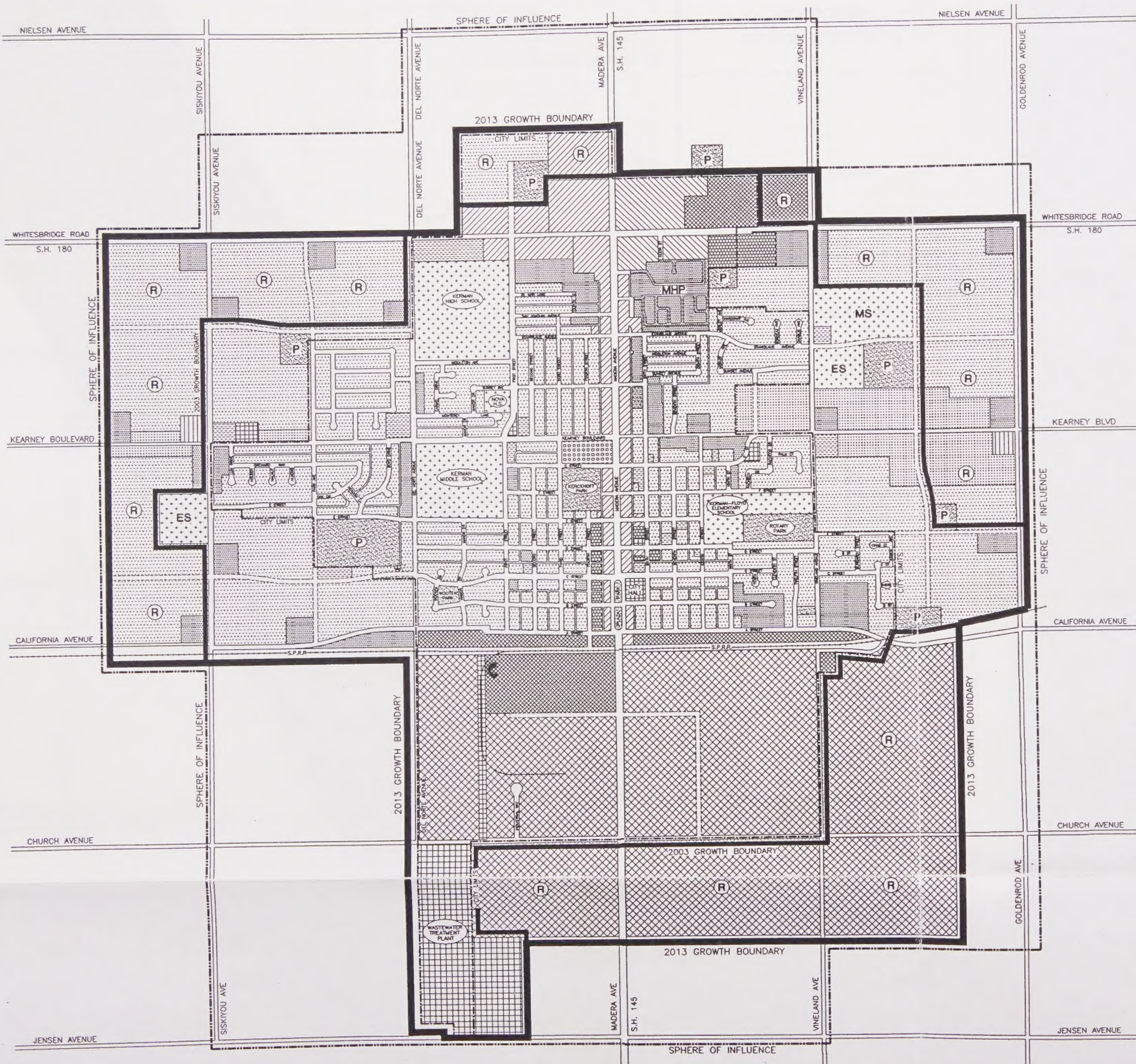
LAND USE MAP

Exhibit 3 identifies the land use designations applied to the Kerman planning area. The Land Use Map shows land designated for urban development that is outside Kerman's current Sphere of Influence (SOI). In order to fully implement the Land Use Element, Kerman will be required to amend its SOI, subject to LAFCO approval.

TABLE 6
GENERAL PLAN/ZONING CONSISTENCY MATRIX

<u>LAND USE DESIGNATIONS</u>	<u>KERMAN ZONE DISTRICTS</u>												
	<u>UR</u>	<u>O</u>	<u>RR</u>	<u>R-1</u>	<u>R-2</u>	<u>R-3</u>	<u>PA</u>	<u>CN</u>	<u>CG</u>	<u>CS</u>	<u>MU</u>	<u>M-1</u>	<u>M-2</u>
Very Low Density Residential													
Low Density Residential													
Medium Density Residential													
High Density Residential													
Neighborhood Commercial													
General Commercial													
Service Commercial													
Regional Commercial													
Office													
Mixed Use													
Industrial													
Public													
Quasi-Public													
Schools													
Parks													
Agriculture													

Note: denotes consistency between land use designation and zone district; a blank denotes lack of consistency.
A land use designation followed by (R) indicates a Reserve and consistent zoning is the UR zone.



GENERAL PLAN LAND USE MAP

LAND USE DESIGNATIONS

RESIDENTIAL

- VERY LOW
- LOW
- MEDIUM
- HIGH

COMMERCIAL

- GENERAL COMMERCIAL
- NEIGHBORHOOD COMMERCIAL
- SERVICE COMMERCIAL
- REGIONAL COMMERCIAL

OFFICE

MIXED USE

INDUSTRIAL

PUBLIC

QUASI-PUBLIC

SCHOOLS

PARKS

AGRICULTURE

BOUNDARIES

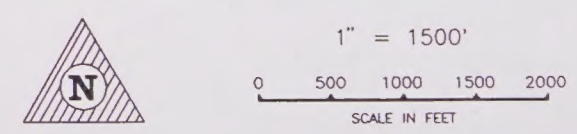
- CITY LIMITS (EXISTING)
- SPHERE OF INFLUENCE (EXISTING)
- 2003 GROWTH BOUNDARY
- 2013 GROWTH BOUNDARY

SPECIAL DESIGNATIONS

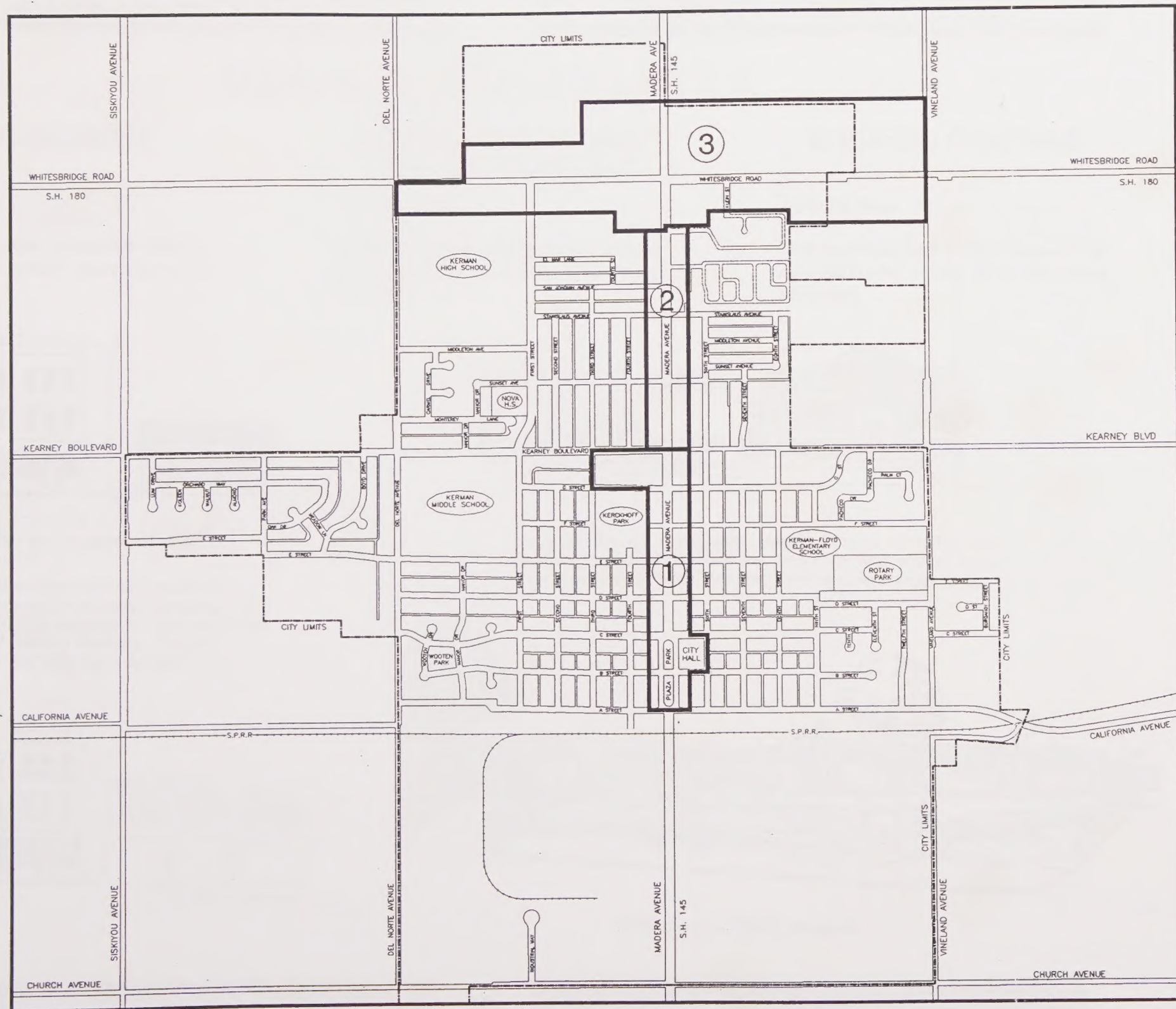
- RESERVE

CITY OF KERMAN GENERAL PLAN UPDATE

EXHIBIT 3



**COLLINS & ASSOCIATES
PLANNING CONSULTANTS**

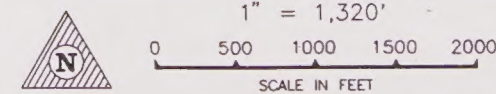


PROPOSED DESIGN DISTRICTS

- ① HISTORICAL TOWNSITE
- ② MADERA AVENUE
(NORTH OF KEARNEY BOULEVARD)
- ③ WHITESBRIDGE AVENUE

CITY OF Kerman GENERAL PLAN UPDATE

EXHIBIT A-1



**COLLINS & ASSOCIATES
PLANNING CONSULTANTS**

DESIGN GUIDELINES

HISTORIC TOWNSITE

Building Scale

Building scale and proportion shall be compatible with surrounding buildings.



Diagrams above and below illustrate the concept of proportion, scale, and repetition of design elements. New downtown buildings should be designed to complement the scale and proportion of existing buildings. This will facilitate a harmonious and cohesive downtown appearance.



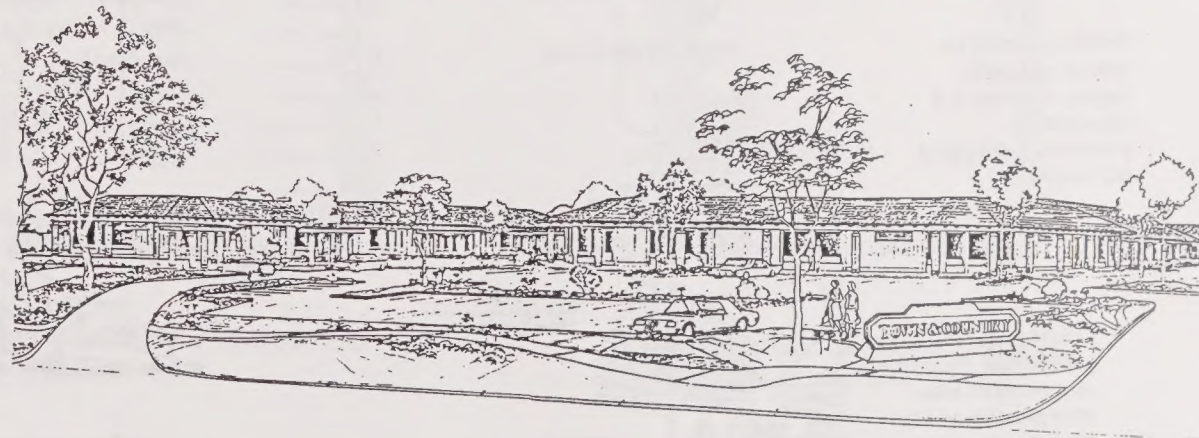
MADERA AVENUE north of KEARNEY BOULEVARD

Building Scale

Building scale and proportion shall be compatible with surrounding buildings.



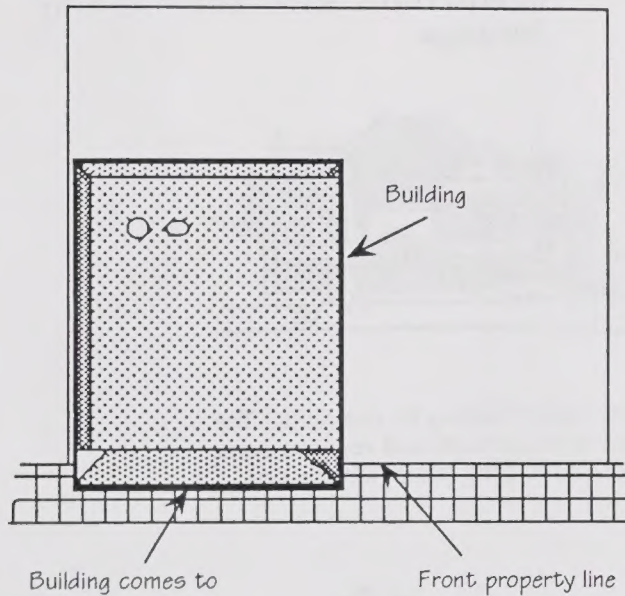
New building on left compliments older building to the right. The new building is similar in scale and proportion, and repeats some of the design elements of the older building (lines, window size, etc.)



Buildings are uniformly designed

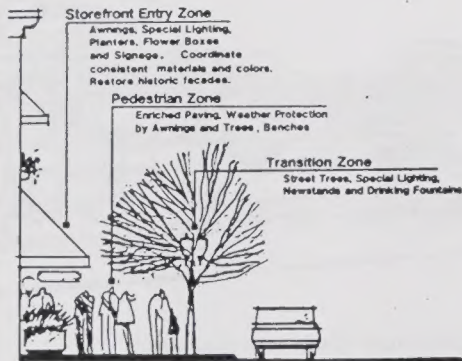
HISTORIC TOWNSITESetbacks

To the extent possible, buildings shall be located on the site so that at least one-half of the length of the front property line abuts a building wall.

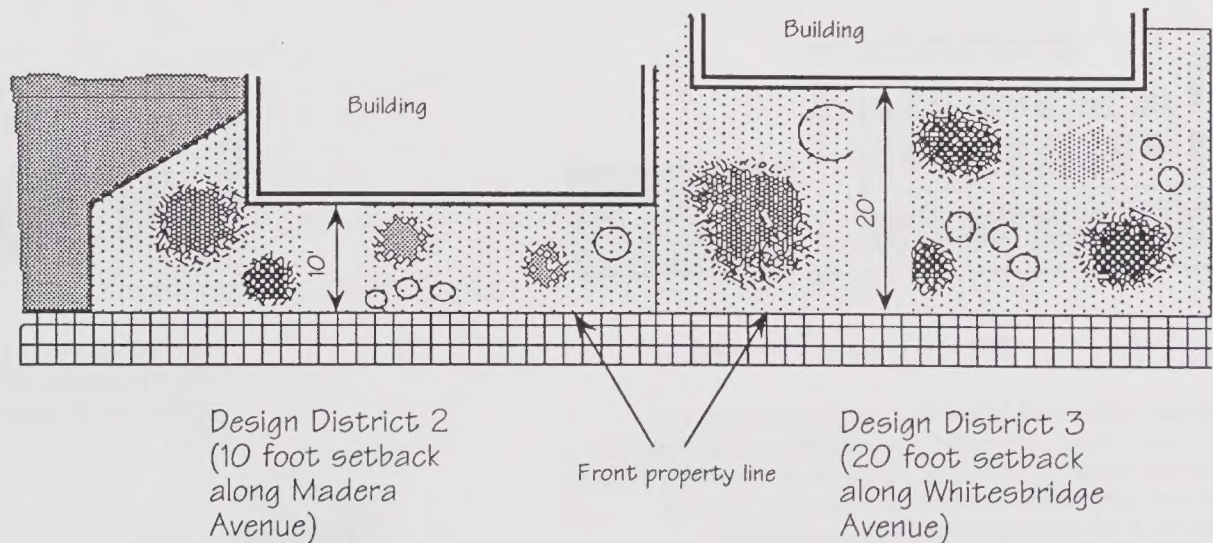


Building comes to rear of sidewalk, helping to create a "downtown" pedestrian shopping atmosphere

Downtown pedestrian shopping environment with storefronts on the street.

MADERA AVENUE north of
KEARNEY BOULEVARDSetbacks

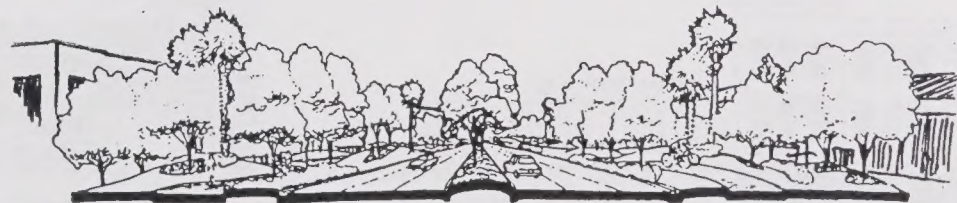
New development shall incorporate a ten foot landscaped setback along the front property line.



Design District 2
(10 foot setback
along Madera
Avenue)

WHITESBRIDGE AVENUESetbacks

New development shall incorporate a twenty foot landscaped setback along the front property line.

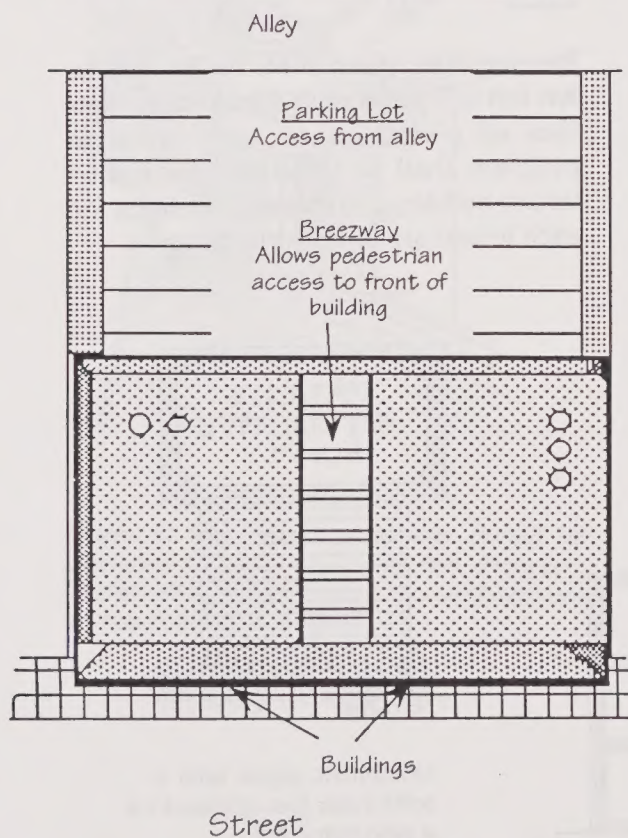


Design District 3
(20 foot setback
along Whitesbridge
Avenue)

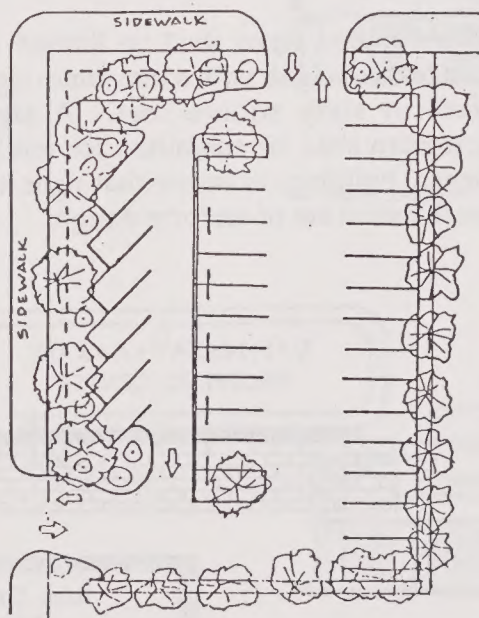
Uniform landscaped setback fosters a parkway appearance

HISTORIC TOWNSITEParking

Parking shall be located to the rear of new buildings and take access from the alley on the rear of the site, if an alley is present. No portion of the parking lot shall be located between the building and front property line.

MADERA AVENUE north of
KEARNEY BOULEVARDParking

Per existing standards, except that five percent of the area of new parking lots shall be landscaped to achieve a fifty percent shading factor



Parking lot design with five percent landscaping

WHITESBRIDGE AVENUEParking

Per existing standards, except that five percent of the area of new parking lots shall be landscaped to achieve a fifty percent shading factor

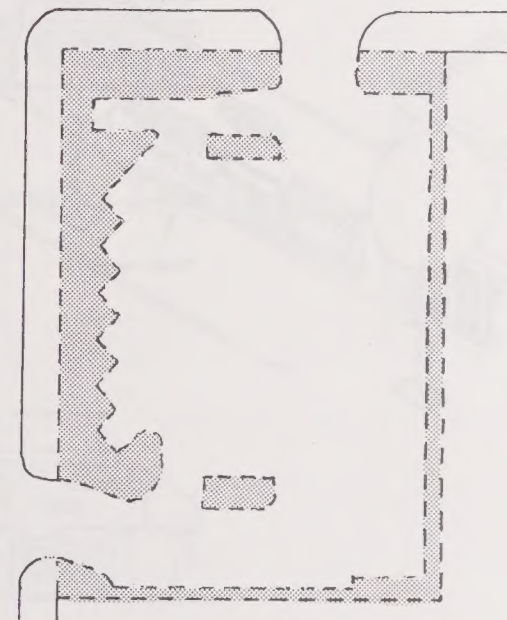
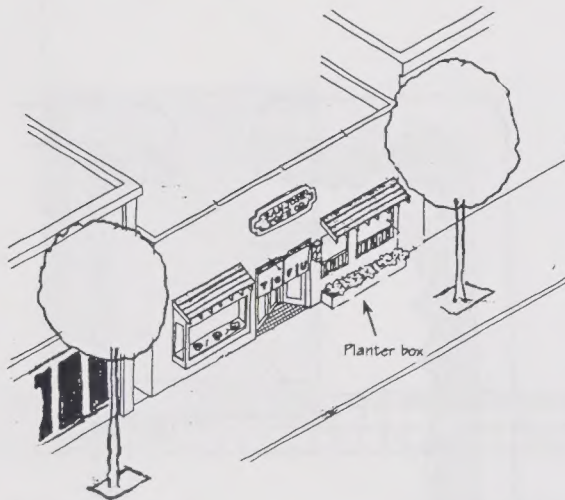


Diagram shows landscape areas of parking lot to the left.

HISTORIC TOWNSITELandscaping

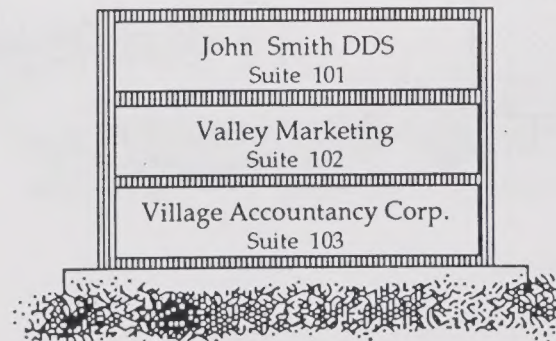
Street trees shall be planted at intervals in sidewalks. No landscaping along front property line except for narrow (two feet wide, maximum) planter boxes.

MADERA AVENUE north of
KEARNEY BOULEVARDLandscaping

There shall be a ten foot landscaped setback along front property lines. Five percent of new parking lots shall be landscaped to achieve a fifty percent shading factor.

Signs

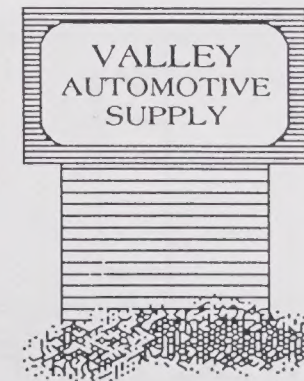
Freestanding signs shall be limited to ten feet in height, with a maximum sign face of sixty square feet. A sign program shall be submitted for multi-tenant buildings to ensure that signs for each tenant are of uniform design.

WHITESBRIDGE AVENUELandscaping

There shall be a twenty foot landscaped setback along front property lines. Five percent of new parking lots shall be landscaped to achieve a fifty percent shading factor.

Signs

Freestanding signs shall be limited to ten feet in height, with a maximum sign face of sixty square feet. A sign program shall be submitted for multi-tenant buildings to ensure that signs for each tenant are of uniform design.



Monument signs, with a solid base (as opposed to a pole sign) are encouraged

HISTORIC TOWNSITE

Signs

Should be pedestrian in scale. Signs for multi-tenant buildings shall be uniform in design



Signs in the historic townsite should be designed to cater to pedestrian shoppers. Design should complement the architecture of the building it serves.

MADERA AVENUE north of
KEARNEY BOULEVARD

Signs (continued)

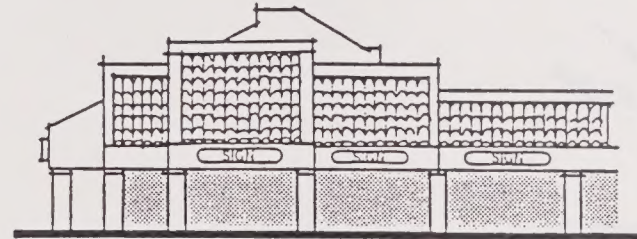
Yes

No

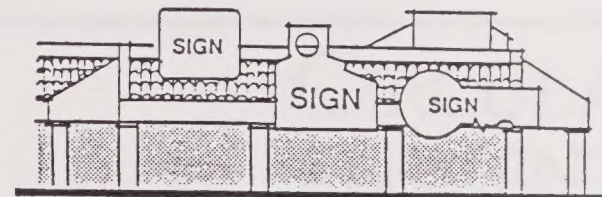
WHITESBRIDGE AVENUE

Signs (continued)

Multi-tenant projects shall establish a sign program to ensure uniform sign appearance.



All signs appear uniform and consistent in appearance

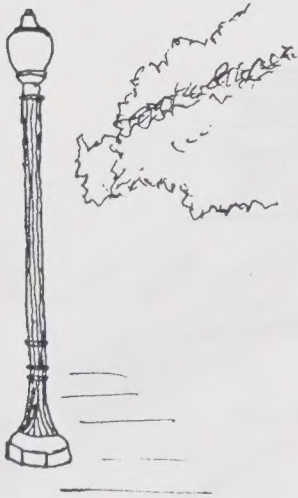


Signs are inconsistently designed, detracting from the overall appearance of the center

HISTORIC TOWNSITE

Outdoor Lighting

Light standards shall be of historic design as shown below.



MADERA AVENUE north of
KEARNEY BOULEVARD

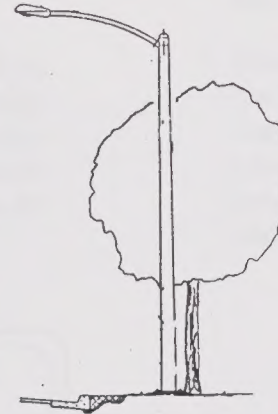
Outdoor Lighting

Light standards shall be provided as required by the Kerman Improvement Standards Manual at intervals specified by the manual

WHITESBRIDGE AVENUE

Outdoor Lighting

Light standards shall be provided as required by the Kerman Improvement Standards Manual at intervals specified by the manual



CHAPTER 3

CIRCULATION ELEMENT

CHAPTER 3 • CIRCULATION ELEMENT

INTRODUCTION

The Circulation Element is second only to the Land Use Element in terms of importance to a community. It has a significant impact on existing and future residents of Kerman because it determines the route and mode by which persons are going to travel within the community and to other destinations outside the community.

Section 65302 (b) of the Government Code indicates that the circulation element must disclose the general location and extent of existing and proposed major thoroughfares, transportation routes and transportation-related facilities.

The Court has indicated that in addition to indicating that roadway improvements must be consistent with the General Plan, (*Friends of "B" Street . et. al. v. City of Hayward, et. al.*, 106 Cal. App. 3d 988 (1980)), there must be a correlation between the circulation and land use elements, (*Concerned Citizens of Calaveras County v. Board of Supervisors of Calaveras County* 166 Cal. App. 3d 90 (1985)). Generally, correlation is dependent upon the two elements using the same population and land use projections.

The Kerman Circulation Element contains six primary components:

- 1) existing conditions;
- 2) an evaluation of the existing circulation system;

CHAPTER 3 • Circulation Element

- 3) traffic projections and evaluation;
- 4) circulation goals;
- 5) the Plan - issues, policies and action programs; and
- 6) circulation map.

EXISTING CONDITIONS

In addition to the information contained in this chapter, information on existing conditions in Kerman is also contained in Part 2 of this document.

Roadways

Kerman's circulation system is based on a grid pattern that was established in the early 1900s when the original townsite was formed. The original townsite extended from A Street (California Avenue) on the south to Kearney Boulevard on the north and from 1st Street on the east to 9th Street on the west. Each street had a 60-foot right-of-way except for Madera Avenue and C Street. Madera Avenue has a 200-foot right-of-way on the south end, which contains Plaza Park, and a 100-foot right-of-way on the north end. C Street, which was originally proposed as a commercial street has a right-of-way of 80 feet.

Kerman's circulation system contains arterials, major and minor collectors, local roadways and alleys. A definition of each type of roadway is provided below. In addition, Kerman's existing arterials and collectors are named and described.

Arterial - Provides for through traffic movement on continuous routes through a city. It generally connects with other arterials, highways, freeways. Also it connects a city with other cities. Arterials are generally four lane roadways, divided and undivided. Kerman has two arterials - State Highways 145 (Madera Avenue) and 180 (Whitesbridge Road). State Highway 145 connects Kerman

with Madera and State Highway 99 to the north and Interstate 5 to the south. Highway 180 connects Kerman with Fresno and Highway 99 to the east and with Mendota to the west.

Madera Avenue, between Whitesbridge Avenue and Church Street, has four travel lanes, two parking lanes and a 15-foot median with left-turn pockets. It narrows to two lanes just north of Whitesbridge and south of Church. Madera Avenue's right-of-way ranges from 60 to 100 feet.

Whitesbridge, between Del Norte and Vineland avenues, has four travel lanes and two parking lanes. It narrows to two lanes east of Del Norte and west of Vineland. Whitesbridge's right-of-way ranges in width from 60 to 100 feet.

Major Collector - Provides for traffic movement around or through a city. It generally connects a collector with another collector or arterial. Major collectors are generally two lanes, divided, or four lanes, undivided. It provides access to Kerman's four quadrants; they are generally spaced every 1/2 mile.

Kerman has three east/west and three north/south major collectors. The east/west collectors are Church Avenue, from Del Norte to Vineland; California Avenue, from Siskiyou to Vineland; and Kearney Avenue, from Siskiyou to Vineland. The north/south collectors are Siskiyou Avenue, from California to Whitesbridge; Del Norte Avenue, from Church to Whitesbridge; and Vineland Avenue, from Church to Whitesbridge.

These major collectors have geometrics that range from two travel lanes and two parking lanes to two travel lanes, two parking lanes and a 15-foot median with left-turn pockets. These collectors have rights-of-way that range in width from 60 feet to 80 feet.

Minor Collector - Provides for traffic movement through a city. It generally connects a local roadway with another collector or arterial. Minor collectors are generally two lanes with two parking lanes. They provide access to major collector roadways from two or more neighborhoods. They generally are spaced every 1/4 mile.

Kerman has three east/west and three north/south minor collectors. East/west collectors are C Street, from 1st to 9th; E Street, from Siskiyou to 8th; and Stanislaus Street, from 1st to Vineland. North/south collectors are Park Avenue, from Kearney to California; 1st Street, from Whitesbridge to California; and 8th Street, from Kearney to California.

These minor collectors have geometrics that range from two travel lanes and two parking lanes to two travel lanes, two parking lanes and a 15-foot center turning median. These collectors have rights-of-way that range in width from 60 feet to 80 feet.

Local - Provides for internal traffic movement within a neighborhood and serves to provide direct access to abutting property. Local streets generally have only two lanes.

Local roadways provide direct access to Kerman's residential neighborhoods and serve to direct neighborhood traffic to adjacent major or minor collectors. These roadways have two travel lanes and two parking lanes. Their rights-of-way range in width from 56 feet for cul-de-sacs to 60 feet for through streets.

Alleys - Provides rear access to residential dwellings and serves as a route by which solid waste is collected and an area where utilities are installed.

Kerman has an extensive alley system that provides rear access to residential dwellings and commercial buildings fronting onto Madera Avenue. These alleys are paved and have a right-of-way width of 20 feet.

Railroads

Kerman is served by a branch line of the Southern Pacific Railroad. Spur lines serve various plants in Kerman's industrial park. Amtrak provides passenger service from the depot in Fresno.

Air Service

Kerman is served by the Fresno Air Terminal, 20 miles to the east, which provides regularly scheduled freight and passenger service. The Fresno-Chandler Airport, 10 miles to the east, furnishes private and company aircraft hangers and tie-downs

Public Transportation

Two public transportation systems are available to residents in Kerman. The Fresno County Rural Transit Agency provides a bus for dial-a-ride trips within the greater Kerman area. This system, which averages about 20 persons per day, serves primarily the senior citizen population in Kerman.

The Fresno County Economic Opportunities Commission (EOC) provides inter-city transportation through the Westside Corridor bus. This bus provides transportation from Firebaugh, San Joaquin, Mendota and Kerman into Fresno. One to three persons per day from Kerman use this system.

EVALUATION OF EXISTING CIRCULATION SYSTEM

An evaluation of Kerman's existing circulation system is furnished in this chapter and in Part 2 of this document. This portion of the Circulation Element expands on the evaluation of roadway and intersection capacities, connectivity, and traffic safety.

Capacity refers to an intersection's or roadway's ability to effectively carry traffic - without congestion and periodic stops and starts. Connectivity pertains to how well various sections of the city are connected together with roadways. Is it easy to travel from one section of the city to another? Traffic safety pertains to how safe a roadway is for the traveler. For example, does a collector or arterial roadway contain a number of intersections that potentially create unsafe traffic conditions?

Capacity Evaluation

Roadways

The ability of a roadway to carry traffic is a function of many factors, including street width, the number of travel lanes, the number of intersecting streets, the presence of signals, and the existence of medians. A roadway's volume is increased during "peak-hour" times - 7:00 to 8:30 a.m., 12:00 to 1:00 p.m., and 4:30 to 6:00 p.m.. To measure the traffic capacity of a roadway, a Level of Service (LOS) rating system is used. An LOS of "A" signifies a roadway that has traffic that is free flowing; a roadway with a LOS of "F" is very congested. Table 7 provides an interpretation of the various LOS ratings and Table 8 provides traffic counts for various types of roadways that are operating at a LOS of "E" - a roadway that is experiencing extreme congestion (grid-lock). Typically, an LOS of "C" is considered acceptable by the driving public, however, in smaller cities, it may be too congested for the typical driver.

**TABLE 7
LEVEL OF SERVICE INTERPRETATION**

LOS	DESCRIPTION	volume capacity
A	Free flow, low volume, high operating speed, high maneuverability.	0.00-0.59
B	Stable flow, moderate volume, speed somewhat restricted by traffic conditions, high maneuverability.	0.60-0.69
C	Stable flow, high volume, speed and maneuverability determined by traffic conditions.	0.70-0.79
D	Unstable flow, high volumes, tolerable but fluctuating operating speed and maneuverability.	0.80-0.89

E	Unstable flow, high volumes approaching roadway capacity, limited speed, intermittent vehicle queuing.	0.90-0.99
F	Forced flow, volumes lower than capacity due to very low speeds; heavy queuing of vehicles, frequent stoppages.	above 1.0

Source: Highway Research Board, 1965

TABLE 8
DAILY CAPACITIES FOR KERMAN ROADWAYS

ROADWAY	LEVEL "E" CAPACITIES
4 Lane Freeway	80,000 vehicles per day
4 Lane Divided Arterial	27,000
2 Lane Divided Arterial	15,000
4 Lane Undivided Arterial	24,000
2 Lane Undivided Arterial	12,000
4 Lane Divided Collector	20,000
2 Lane Divided Collector	10,000
4 Lane Undivided Collector	18,000
2 Lane Undivided Collector	9,000

Source: 1985 Highway Capacity Manual

Table 9 shows average daily traffic volumes for Kerman's major roadways and provides a calculated Level of Service rating for segments of each roadway; Exhibit 9 in Part 2 of this document also shows existing traffic counts in the planning area.

TABLE 9
EXISTING TRAFFIC VOLUMES

Street	Lanes	Type(1)	Daily Volume(2)	Daily Capacity(3)	V/C	LOS
Madera						
n/o Whitesbridge	4	A	10,598	24,000	0.44	A
n/o Whitesbridge(4)	2	A	10,598	12,000	0.88	D
Vineland						
n/o Kearney	2	C	1,234	9,000	0.14	A
s/o Kearney	2	C	2,006	9,000	0.22	A
Del Norte						
s/o Whitesbridge	2	C	1,268	9,000	0.14	A
n/o Kearney	2	C	1,533	9,000	0.17	A
n/o California	2	C	424	9,000	0.05	A
s/o Kearney	2	C	1,133	9,000	0.13	A
Whitesbridge						
w/o Madera	4	A	7,502	24,000	0.31	A
w/o Madera(5)	2	A	7,502	12,000	0.62	B
E Street						
w/o Madera	2	C	2,155	9,000	0.24	A
e/o Madera	2	C	1,209	9,000	0.13	A
Church						
w/o Madera	2	C	183	9,000	0.02	A
California						
w/o Goldenrod	2	C	1,937	9,000	0.22	A
Kearney						
w/o Madera	2	C	2,658	9,000	0.3	A
e/o Madera	2	C	2,858	9,000	0.32	A
Jensen						
w/o Madera	2	C	1,581	9,000	0.18	A

1 A: Arterial; C: Collector

2 1993 average volumes obtained from either 1993 field counts or adjusted 1991/1992 volumes.

3 Ultimate capacity.

4 The number of lanes changes from two to four immediately north of Whitesbridge. It is assumed that the daily volume can be applied both to the two-lane and four-lane sections.

5 The number of lanes changes from two to four west of Madera. It is assumed that the daily volume can be applied both to the two-lane and four-lane sections.

Intersections

An LOS analysis, using peak-hour counts, was conducted on Kerman's two key intersections - Madera at Kearney and Madera at Whitesbridge. The LOS criteria for unsignalized intersections is presented in Table 10.

TABLE 10
LEVEL-OF -SERVICE CRITERIA OF UNSIGNALIZED
INTERSECTIONS

<u>Reserve Capacity</u>	<u>Level of Service</u>	<u>Delay to Minor Street Traffic</u>
>400 cars per hour	A	Little or no delay
300-399	B	Short delays
200-299	C	Average delays
100-199	D	Long delays
0-99	E	Very long delays
*	F	Severe congestion

* Demand exceeds capacity

The findings of the LOS analysis are presented in Table 11. The results of this analysis for the Madera at Kearney intersection indicate that, with left-turn, through, and right-turn movements using a shared lane on the Kearney approaches, the eastbound approach currently is operating at LOS D with a reserve capacity of 116 cars per hour, while the westbound approach is at LOS B with a reserve capacity of 322 cars per hour. The southbound left-turn movements (from Madera) are at LOS A, with a reserve capacity of 491 cars per hour, and the northbound left-turn movements are at LOS A, with a reserve capacity of 573 cars per hour.

The analysis of the Madera at Whitesbridge intersection indicate that the northbound, southbound, and eastbound approaches are operating at LOS C, while the westbound approach is at LOS B.

TABLE 11
EXISTING PEAK-HOUR INTERSECTION LEVELS OF
SERVICE

<u>Intersection</u>	<u>Peak Hour LOS</u> ¹			
	<u>East Bound</u>	<u>West Bound</u>	<u>North Bound</u>	<u>South Bound</u>
Madera at Kearney (2-way stop)	D ³	B ³	A ²	A ²
Madera at Whitesbridge (4-way stop)	C	B	C	C

1 Afternoon peak-hour assumed to be 4:30 to 5:30 p.m.

2 For left-turn movement on major street approach.

3 For left-turn, through, and right-turn movements sharing a lane.

Connectivity

Kerman is fortunate that its original roadway system provided for a "grid" pattern. This street pattern insured that all sections of Kerman were interconnected with roadways. In order to insure that Kerman's future circulation system provides this connectivity, future neighborhoods should have a minimum of two access roadways, they should be connected to a minor or major collector, and the collector should be connected to an arterial.

Presently, the only serious connectivity problem in Kerman occurs where Stanislaus Avenue, east of Madera Avenue, deadends into an alley. This designated minor collector should be extended eastward to connect with Vineland Avenue, a major collector.

Traffic Safety

A roadway system that is safe and efficient - free of congestion - is a primary circulation goal of all cities. This goal also promotes a roadway system that is safe for pedestrians and bicyclists,

especially younger children.

The most potentially hazardous roadway in terms of traffic safety is Madera Avenue. Driving, riding or walking across Madera Avenue is hazardous because of the volume and speed of traffic traveling along this roadway.

TRAFFIC PROJECTIONS AND EVALUATION

The Consultant has projected traffic volumes for both roadway segments and certain intersections in the Kerman area. These projections are based on the following assumptions:

1. Traffic volumes on local and State roadway systems will generally increase at a rate similar to population growth rates within the planning area.
2. Persons in Kerman will continue to use cars as their primary mode of transportation.
3. Uses that generate abnormally high volumes of traffic, such as colleges, major manufacturing companies or an office complex, will not locate in the planning area during the planning period.
4. Current traffic flow patterns in the planning area will not change significantly (e.g. two way streets will remain two way; streets will not be closed).
5. Left turn lanes on State Highways 145 and 180 will generally remain unchanged.

Projections

Increases in traffic volumes over the planning period for local and State roadways is going to be generated by the development of the land uses in the Kerman area and by increases in population and development in surrounding communities.

Two traffic volume projections - low and high - for the years 2003 and 2013 are provided in this element. The low projection is based on traffic growth rates provided by Caltrans for various segments of State highways passing through the Kerman area. These annual growth rates range from a low of 1.5 percent to a high of 3.75 percent. The Consultant averaged the various annual growth rates and arrived at a figure of 2.9 percent. The high projection is based on Kerman's annual average population growth rate, which is 3.61 percent.

Projected low and high traffic volumes for years 2003 and 2013 are derived by multiplying the current average daily traffic counts (1993) by 2.9 and 3.61 percent per year. These projections are displayed in Tables 12, 13 and 14.

Projected low and high LOS ratings for the Madera/Kearney and Madera/Whitesbridge intersections are displayed in Table 15. This table shows a LOS rating for each turn movement projected at the two intersections for the years 2003 and 2013.

TABLE 12
PROJECTED AVERAGE DAILY TRAFFIC VOLUMES FOR
ROADWAY SEGMENTS

Street	Location	Direction	1993 Vol (1)	2003	2013
				low/high	low/high
Madera	n/o Whitesbridge	both	10,598	14095/15155	18758/21513
	s/o Whitesbridge	both	18,034	23985/25788	31920/36609
Vineland	n/o Kearney	both	1,234	1641/1764	2184/2505
	s/o Kearney	both	2,006	2668/2869	3550/4072
Del Norte	s/o Whitesbridge	both	1,268	1686/1813	2244/2574
	n/o California	both	424	564/606	750/861
	n/o Kearney	both	1,533	2038/2192	2713/3112
	s/o Kearney	both	1,133	1507/1620	2005/2300
Whitesbridgew/o Madera		both	7,502	9978/10728	13278/15229
	e/o Madera	both	6,763	8995/9671	11970/13729
E Street	w/o Madera	both	2,155	2866/3081	3814/4375
	e/o Madera	both	1,209	1608/1729	2140/2454
Church	w/o Madera	both	183	243/262	324/371
California	w/o Goldenrod	both	1,937	2576/2770	3428/3932
Kearney	w/o Vineland	eb	1,409	1873/2015	2494/2860
	e/o Vineland	wb	826	1099/1181	1462/1677
	w/o Madera	both	2,658	3535/3801	4705/5395
	e/o Madera	both	2,858	3801/4087	5059/5801
Jensen	w/o Madera	both	1,581	2103/2261	2798/3209

(1) Reported volumes adjusted to 1993 volumes based on an annual growth rate of 3.61 percent.

Source: Caltrans. All other volumes obtained Fresno County Public Works Department.

TABLE 13
SEGMENT LEVELS OF SERVICE EVALUATION - 2003

Street	Lanes	Type(1)	Daily	Daily	V/C	LOS
			Volume(2)	Capacity(3)		
Madera						
n/o Whitesbridge	4	A	14095/15155	24,000	.59/.63	A/B
n/o Whitesbridge(4)2		A	14095/15155	12,000	1.17/1.26	F/F
s/o Whitesbridge	4	A	23985/25788	24,000	1.00/1.07	F/F
Vineland						
n/o Kearney	2	C	1641/1764	9,000	.18/.20	A/A
s/o Kearney	2	C	2668/2869	9,000	.30/.32	A/A
Del Norte						
s/o Whitesbridge	2	C	1686/1813	9,000	.19/.20	A/A
n/o Kearney	2	C	2038/2192	9,000	.23/.24	A/A
n/o California	2	C	564/606	9,000	.06/.07	A/A
s/o Kearney	2	C	1507/1620	9,000	.17/.18	A/A
Whitesbridge						
w/o Madera	4	A	9978/10728	24,000	.42/.45	A/A
w/o Madera5	2	A	9978/10728	12,000	.83/.89	D/D
e/o Madera	2	A	8995/9671	12,000	.75/.81	C/D
e/o Madera	4	A	8995/9671	24,000	.37/.40	A/A
E Street						
w/o Madera	2	C	2866/3081	9,000	.32/.34	A/A
e/o Madera	2	C	1608/1729	9,000	.18/.19	A/A
Church						
w/o Madera	2	C	243/262	9,000	.03/.03	A/A
California						
w/o Goldenrod	2	C	2576/2770	9,000	.29/.31	A/A
Kearney						
w/o Madera	2	C	3535/3801	9,000	.39/.42	A/A
e/o Madera	2	C	3801/4087	9,000	.42/.45	A/A
w/o Vineland	2	C	1873/2015	9,000	.21/.22	A/A
e/o Vineland	2	C	1099/1181	9,000	.12/.13	A/A
Jensen						
w/o Madera	2	C	2103/2261	9,000	.23/.25	A/A

1 A: Arterial; C: Collector

2 1993 average volumes obtained from either 1993 field counts or adjusted 1991/1992 volumes.

3 Ultimate capacity.

4 The number of lanes changes from two to four immediately north of Whitesbridge. It is assumed that the daily volume can be applied both to the two-lane and four-lane sections.

5 The number of lanes changes from two to four west of Madera. It is assumed that the daily volume can be applied both to the two-lane and four-lane sections.

TABLE 14
SEGMENT LEVELS OF SERVICE EVALUATION -2013

Street	Lanes	Type(1)	Volume(2)	Capacity(3)	V/C	LOS
					low/high	low/high
Madera						
n/o Whitesbridge	4	A	18758/21513	24,000	.78/.90	C/D
n/o Whitesbridge(4)	2	A	18758/21513	12,000	1.56/1.79	F/F
s/o Whitesbridge	4	A	31920/36609	24,000	1.33/1.52	F/F
Vineland						
n/o Kearney	2	C	2184/2505	9,000	.24/.28	A/A
s/o Kearney	2	C	3550/4072	9,000	.39/.45	A/A
Del Norte						
s/o Whitesbridge	2	C	2244/2574	9,000	.25/.29	A/A
n/o Kearney	2	C	2713/3112	9,000	.30/.35	A/A
n/o California	2	C	750/861	9,000	.08/.10	A/A
s/o Kearney	2	C	2005/2300	9,000	.22/.25	A/A
Whitesbridge						
w/o Madera	4	A	13278/15229	24,000	.55/.63	A/B
w/o Madera5	2	A	13278/15229	12,000	1.1/1.27	F/F
e/o Madera	2	A	11970/13729	12,000	1.0/1.14	F/F
e/o Madera	4	A	11970/13729	24,000	.5/.57	A/A
E Street						
w/o Madera	2	C	3814/4375	9,000	.42/.49	A/A
e/o Madera	2	C	2140/2454	9,000	.24/.27	A/A
Church						
w/o Madera	2	C	324/371	9,000	.04/.04	A/A
California						
w/o Goldenrod	2	C	3428/3932	9,000	.38/.44	A/A
Kearney						
w/o Madera	2	C	2494/2860	9,000	.28/.32	
e/o Madera	2	C	1462/1677	9,000	.16/.19	A/A
w/o Vineland	2	C	4705/5395	9,000	.52/.60	A/B
e/o Vineland	2	C	5059/5801	9,000	.56/.64	A/B
Jensen						
w/o Madera	2	C	2798/3209	9,000	.31/.36	A/A

1 A: Arterial; C: Collector

2 1993 average volumes obtained from either 1993 field counts or adjusted 1991/1992 volumes.

3 Ultimate capacity.

4 The number of lanes changes from two to four immediately north of Whitesbridge. It is assumed that the daily volume can be applied both to the two-lane and four-lane sections.

5 The number of lanes changes from two to four west of Madera. It is assumed that the daily volume can be applied both to the two-lane and four-lane sections.

TABLE 15
LEVELS OF SERVICE AT MAJOR INTERSECTIONS

Intersection	Peak Hour LOS ¹			
	East Bound	West Bound	North Bound	South Bound
Madera at Kearney (2-way stop)				
2003				
LOW	F	D	A	B
HIGH	F	E	A	B
2013				
LOW	F	E	B	D
HIGH	F	F	C	D
Madera at Whitesbridge (4-way stop)				
2003				
LOW	F	C	F	D
HIGH	F	D	F	D
2013				
LOW	F	F	F	F
HIGH	F	F	F	F

1 Afternoon peak-hour assumed to be 4:30 to 5:30 p.m.

Evaluations

Information contained in Tables 13 and 14 indicate that Kerman's two arterial roadways - Madera Avenue and Whitesbridge Road - will experience a D or F LOS by 2013 under low or high traffic projections. All other roadways will have a projected LOS of B or better. Table 15 shows projected LOS ratings for Kerman's two main intersections for the years 2003 and 2013. These projections indicate that by the year 2013, under current traffic control conditions, approaches at the Madera and Kearney intersection will be operating at a LOS ranging from B to F and the Madera and the Whitesbridge intersection will operate at a LOS of F.

CIRCULATION GOALS

Circulation goals express general community values as they relate to travel, traffic safety, mobility, and funding for maintenance and construction of roadways. Circulation goals for Kerman are as follows:

1. INSURE THAT STREETS AND INTERSECTIONS IN KERMAN ARE NOT CONGESTED.
2. PROVIDE EFFICIENT CIRCULATION ACCESS TO ALL PARTS OF KERMAN.
3. ENSURE AMPLE OFF-STREET PARKING FOR NEW USES LOCATING IN KERMAN.
4. DEVELOP STREETS THAT ARE WELL DESIGNED AND VISUALLY ATTRACTIVE.
5. PROMOTE ALTERNATIVE MODES OF TRANSPORTATION, INCLUDING BICYCLES, BUS USE AND WALKING.
6. ESTABLISH TRUCK ROUTES THAT ARE NOT DISRUPTIVE TO RESIDENTS OR BUSINESS IN KERMAN.
7. PROVIDE FOR LONG TERM FINANCING FOR STREET CONSTRUCTION AND MAINTENANCE.

A. TRAFFIC

One thing that people who live in cities tend to agree on is that there is too much traffic on their street. Even if the roadway is operating at a LOS of A, people will still complain that there is too much traffic passing in front of their home. While it is difficult to improve on a roadway that has a LOS of A, cities can embrace policies and action programs that will insure that traffic impacts in the community will be kept to a minimum.

1. POLICY: A level of service C will be the desirable minimum service level in Kerman at which highway, arterial and collector segments will operate. A level of service of B will be the desirable minimum service level in Kerman at which intersections will operate.

ACTION:

a. The City will program into its 5-year capital budget, street improvements that will insure the specified LOS is not exceeded in the city limits. Funds for these street improvement projects will come from gas tax and transportation funds.

b. The City, working with Caltrans, will periodically check traffic warrants at the Whitesbridge/Madera and Kearney/Madera intersections in order to plan for proper signalization and turn lanes at these intersections.

2. POLICY: Land use projects which generate large amounts of traffic shall be precluded from channeling traffic onto local roadways.

ACTION:

a. The Planning Department shall recommend denial of discretionary land use projects to the Planning Commission and City Council that are inconsistent with this policy.

3. POLICY: In order to insure circulation connectivity in Kerman, where required railroad crossings will be constructed.

ACTION:

a. Adoption of the Circulation Map will implement this policy.

b. The City will calculate and implement development impact fees for railroad crossings consistent with the Circulation Element map.

B. ARTERIALS & COLLECTORS

Arterial roadways carry the greatest amount of traffic in Kerman. Not only are traffic volumes higher but also the speed of travel. Potentially, these roadways have the greatest traffic safety problems because of these factors.

Most persons in Kerman will travel on an arterial roadway at least once a day. Travel efficiency on these roadways is important for two reasons: (1) Stop and start conditions cause the traveler to be late for their destination. (2) These types of conditions cause greater amounts of air pollution - already a significant environmental problem in the Valley. Traffic that moves smoothly minimizes these two problems.

Aside from freeways and arterials, collectors carry the greatest amount of traffic in a city. Unlike freeways and arterials, collector roadways traverse residential neighborhoods. These are the streets that drain traffic from the neighborhoods and convey it towards other collector or arterial roadways.

Because collectors pass through neighborhoods, their effectiveness to channel traffic in a safe and effective manner can be diminished by land uses in a neighborhood. For example, a new residential subdivision that allows residential dwellings to front onto a collector creates a situation where numerous driveways from these dwellings intersect with the collector. This creates a traffic safety problem for persons backing out onto the collector as well as for the person traveling along the collector.

Collectors by their nature can have the greatest impact on the residential neighborhoods of a city. They can generate noise that impacts residents and their appearance can either enhance or detract from a neighborhood's visual appeal.

1. POLICY: Driveways that intersect with arterials and collectors should be kept to a minimum and, if possible, should be reduced when redevelopment occurs along an arterial roadway.

ACTION:

a. Through the site plan review process, the Planning and Engineering Departments will discourage development designs that create this condition.

2. POLICY: Left turn lanes shall be constructed on arterials where they intersect with other arterials or collectors.

ACTION:

a. The Public Works Department will coordinate with Caltrans to insure that left turn lanes are constructed along State Highways 145 and 180.

3. POLICY: New driveways constructed onto arterial roadways shall meet Caltran's construction specifications.

ACTION:

a. Through Kerman's site plan review process, Caltrans will review all new construction projects along State Highways 145 and 180.

4. POLICY: Curbing at the intersections of arterial and collector streets should be painted red at least 50 feet in all directions from the corner curb radius in order to provide sufficient sight-line for traffic pulling into the intersection.

ACTION:

a. The Public Works Department will coordinate with Caltrans to identify which curbs at the aforementioned intersections should be red-curbed.

5. POLICY: Arterial roadways should have sufficient right-of-way to contain four travel lanes, two parking lanes, and a median/turn lane; major collector roadways sufficient right-of-way for two travel lanes, two bike lanes, two parking lanes and a median/turn lane; and minor collectors should have sufficient

right-of-way for two travel lanes, two parking lanes, two 6-foot parkways, and two 4 1/2-foot sidewalks.

ACTION:

a. The Public Works Department will coordinate with Caltrans to insure that sufficient right-of-way will be dedicated when development occurs along State Highways 145 and 180.

b. Major and minor collector roadways will be constructed consistent with street cross-section illustrations contained in Appendix A of the Circulation Element.

6. POLICY: All street improvement projects, including widening, closing, or constructing new roadways, will be reviewed by the Planning and Engineering Departments to confirm that the project is consistent with the Circulation Element.

ACTION:

a. The Planning and Public Works Departments will review street projects to determine consistency with the Circulation Element.

C. PARKING

The success of commercial businesses is sometimes dependent upon adequate parking. The parking must be in close proximity to the commercial business, it must be safe, and if possible, it should exemplify a pleasant parking environment - landscaped, well lit, and large parking stalls.

For other uses, such as public facilities, churches, apartments, and industries, adequate on-site parking is important so that surrounding land uses are not negatively impacted by persons parking on or in front of these properties.

1. POLICY: On-street parking caused by new uses located along arterial or collector streets should be discouraged.

ACTION:

a. Through the site plan review process, the Planning and Engineering Departments will insure that the design of the project discourages on-street parking on these types of roadways.

2. POLICY: Parking lots for new uses shall contain landscaping, proper lighting and shall be properly designed to insure maneuverability of vehicles.

ACTION:

a. Through the site plan review process, the Planning and Engineering Departments will insure that the design of new parking lots contain these features.

b. The Zoning Ordinance shall be amended to include parking lot design standards, including a requirement for 50 percent shading within a ten-year time frame.

3. POLICY: New parking lots along Madera Avenue between California Avenue and Kearney Boulevard should be designed so that the parking lot does not occupy the entire frontage of the site.

ACTION:

a. Through the site plan review process, the Planning Department will insure that the design of new parking lots will be consistent with this policy.

D. SIGNALIZATION

1. POLICY: The City will adopt a development impact fee that finances the signalization of intersections.

ACTIONS:

a. The City will periodically review the levels of service ratings at

major intersections in Kerman to determine if signals should be installed.

b. The City will calculate and implement development impact fees for signalization that are consistent with the Circulation Element map and Assembly Bill 1600 (legislation that requires a nexus, or connection, between the fee being required and the improvement to be installed).

E. STREET DESIGN

The primary purpose of a street is to convey traffic from one destination to another. Streets do not have to be a sterile public improvement that detracts from the appearance of a neighborhood. They can be improvements that enrich the appearance a neighborhood and creates a unifying theme of trees, lighting and signage.

1. POLICY: The City shall have prepared a streetscape design plan, which will establish a 15-year improvement program for the construction of landscaped medians for specific roadways in the community. This Plan should include details for lighting, landscaping and signing.

ACTION:

a. The Engineering and Planning Departments will prepare the streetscape design plan. Funds will come from tax increment, gas tax, transportation funds and the state grant programs.

F. ALTERNATIVE TRANSPORTATION MODES

Alternative modes of transportation are important to different people for different reasons. For a low-income person or a person on a fixed income, transit service may be the only means of traveling to the store, doctor, or to visit a friend in another city. For the person who is concerned about air pollution, riding the bus may

be their way of improving the air environment. For the family who enjoys riding bikes, this form of transportation becomes a recreational activity.

1. POLICY: The City shall promote all modes of transportation, including mass transit (buses, etc.) bicycle and walking.

ACTION:

a. Through the 5-year capital budget, the City Council should insure that gasoline tax and transportation funds are spent on all modes of transportation.

2. POLICY: The City shall prepare a bikepath design plan which lays out a community-wide bicycle lane network. New subdivisions shall provide for the network.

ACTION:

a. The Engineering and Planning Departments will prepare the bikepath design plan. Funds will come from tax increment, gas tax and transportation funds. Bikepaths will be required to be installed in new subdivisions where required by the bikepath design plan.

G. TRUCK TRAFFIC

Truck traffic can adversely affect residential neighborhoods because of the noise they generate. Further, truck traffic can damage local roadways because the road beds are not designed to carry heavy loads. To repair damaged roadways can be very expensive for cities.

1. POLICY: To avoid the adverse impacts associated with truck traffic, truck routes shall be designated on the following streets: Whitesbridge Road, Madera Avenue, and Church Avenue as well as all existing and proposed streets located within the Kerman Industrial Park.

ACTION:

a. The Public Works Department shall post the above roadways as truck routes.

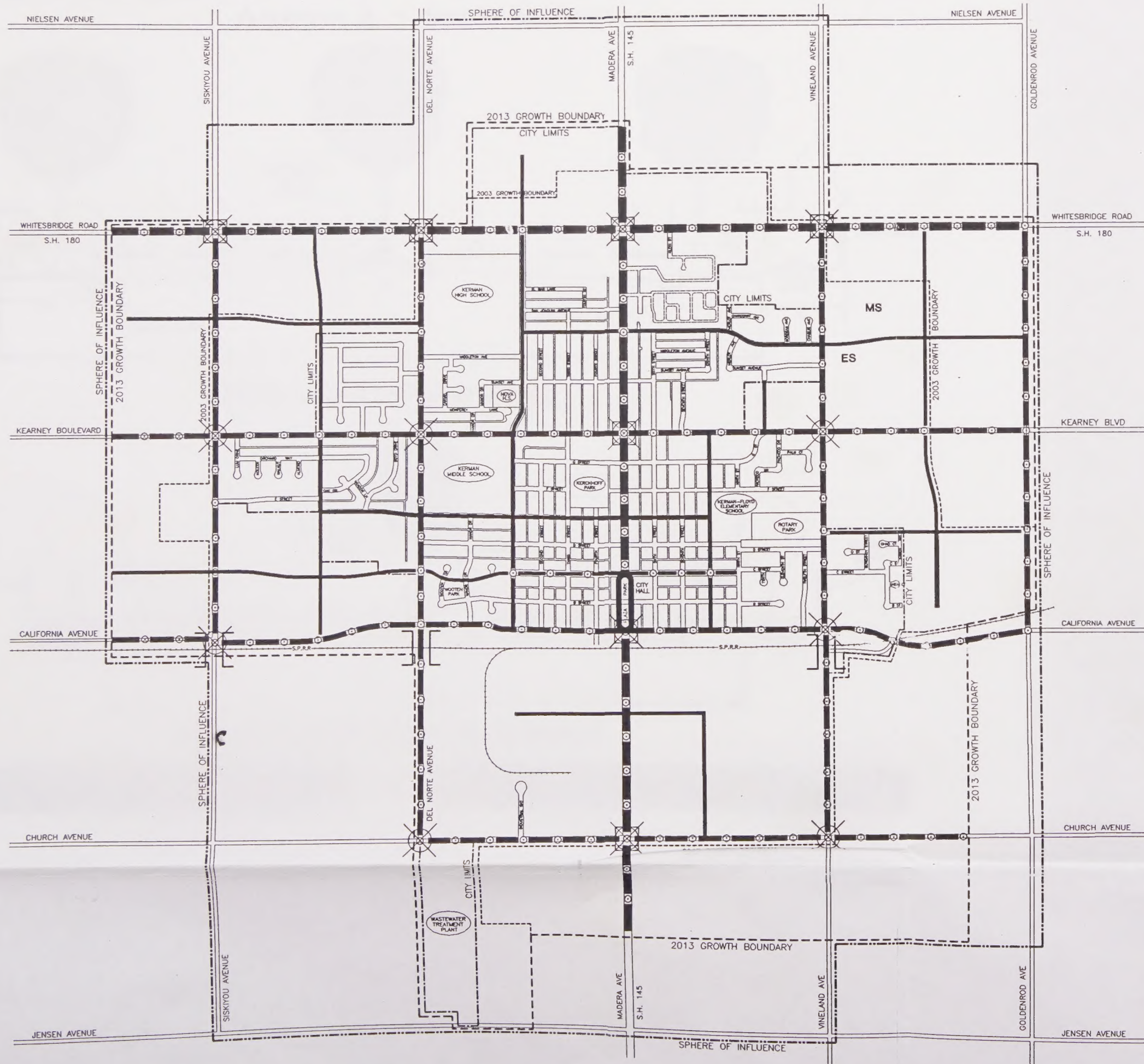
2. POLICY: The City of Kerman will insure that transportation and gasoline tax funds and other funds that can be used for roadway projects are properly programmed through the 5-year capital budget to implement the policies of the Circulation Element.

ACTION:

a. The Public Works Director and City Manager will coordinate through the annual budget process to insure that Circulation Element policies are being properly implemented.

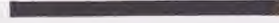
CIRCULATION MAP

Exhibit 4 depicts circulation designations for streets within the Kerman planning area.



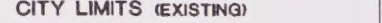
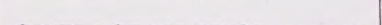
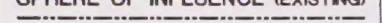
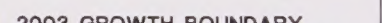
GENERAL PLAN CIRCULATION ELEMENT MAP

STREET CLASSIFICATIONS

- ARTERIAL   W/ LANDSCAPED MEDIAN
- MAJOR COLLECTOR   W/ LANDSCAPED MEDIAN
- MINOR COLLECTOR 

-  STATE ROUTE TRAFFIC SIGNAL
-  CITY TRAFFIC SIGNAL
-  RAILROAD CROSSING

BOUNDARIES

- CITY LIMITS (EXISTING) 
- SPHERE OF INFLUENCE (EXISTING) 
- 2003 GROWTH BOUNDARY 
- 2013 GROWTH BOUNDARY 

CITY OF KERMAN GENERAL PLAN UPDATE

EXHIBIT 4



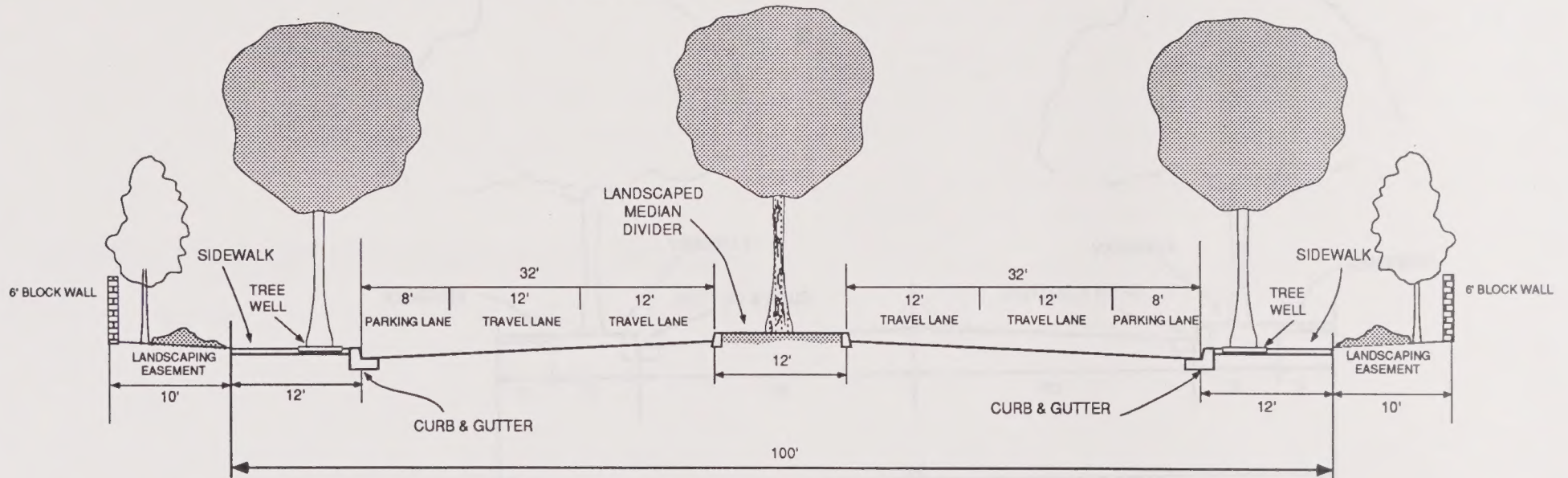
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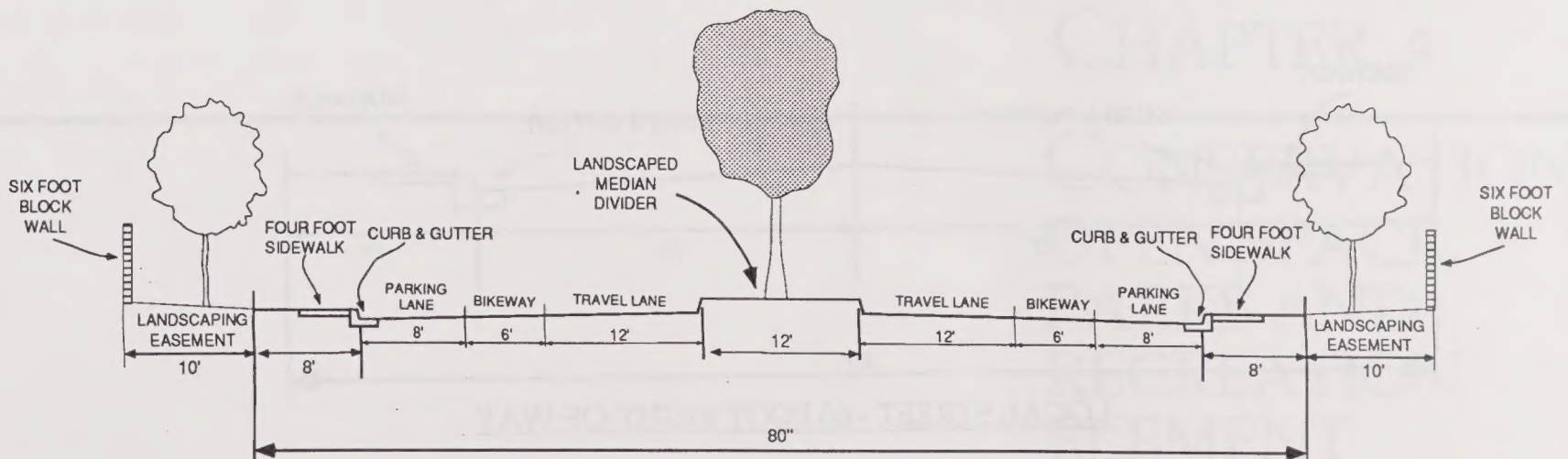
SCALE IN FEET

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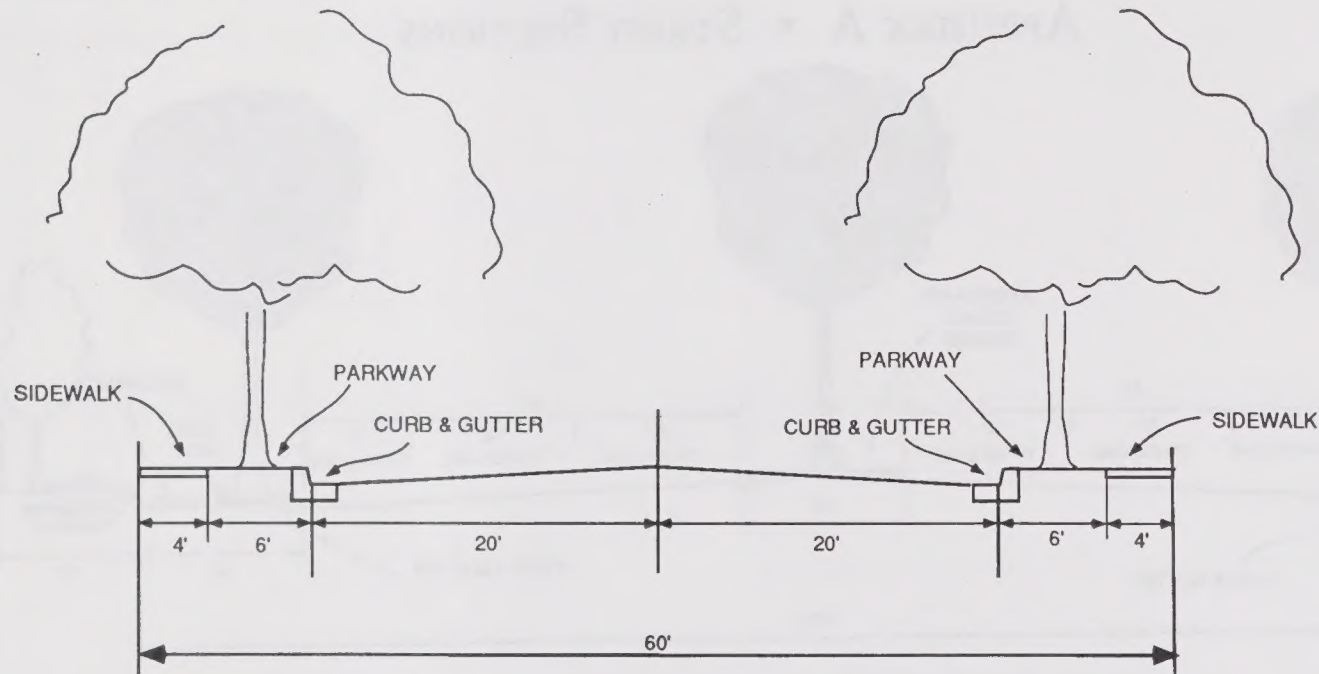
APPENDIX A • STREET SECTIONS



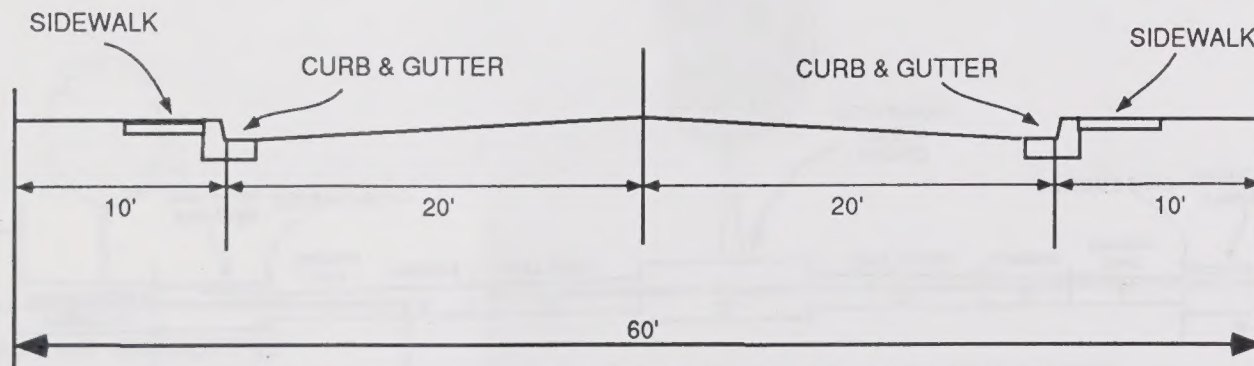
ARTERIAL - 100 FOOT RIGHT-OF-WAY



MAJOR COLLECTOR - 80 FOOT RIGHT-OF-WAY



MINOR COLLECTOR - 60 FOOT RIGHT-OF-WAY



LOCAL STREET - 60 FOOT RIGHT-OF-WAY

CHAPTER 4 CONSERVATION, OPEN SPACE, PARKS AND RECREATION ELEMENT

CHAPTER 4

CONSERVATION, OPEN SPACE, PARKS AND RECREATION ELEMENT

CHAPTER 4 • CONSERVATION, OPEN SPACE, PARKS AND RECREATION ELEMENT

INTRODUCTION

Open space, parks, and recreation facilities enhance the quality of life in a community. The conservation of these types of resources is an integral part of providing for the needs and welfare of a community. Conservation of open space takes planning for the future. If these areas are not planned for at this time and set aside for the future, a city runs the risk of losing them to development. Open space lands are undeveloped areas that provide a low density perception in an urban area, define the edge of a community, and provide the sight lines that allow long distance vistas to the Sierra Nevada and the Coast Range, agriculture fields, or other local viewpoints. Most people think of open space as park areas, but a large portion of a city's open space is provided by residential yard areas and right-of-way along streets.

A park is an open area that provides an assortment of recreation and leisure opportunities for a community. A park can include school playgrounds, community recreation parks, community centers, and other publicly-owned outdoor recreation areas. Parks can supply active as well as passive recreation. Activities can range from family picnics to organized sporting events.

One of the primary purposes of parks is to contribute to Kerman's quality of life. The City accomplishes this through the provision of convenient, well-equipped and maintained sites and facilities, conservation of natural resources, and a comprehensive and quality program of recreational activities and services for all citizens of the community.

THE ELEMENT

The open space portion of this Element identifies lands that are appropriate for open space and parks acquisition as well as the development of recreation programs on these lands. The Element establishes goals, policies, action programs and standards for the conservation and treatment of open space.

Government Code Section 65560 et seq. defines open space as land that can be used for any of the following uses:

- Conservation of natural resources.
- Managed production of resources.
- Outdoor recreation.
- Preservation of lands for the purpose of protecting the public's health and safety.

Specific requirements of the conservation portion of the Element are identified in Government Code Section 65302 (d). This portion of the element includes "the conservation, development and utilization of natural resources, including water, forests, soils, rivers and other waters, wildlife, and other natural resources." Items that are addressed in this category include the conservation of:

- View opportunities.
- Soils.
- Agricultural lands.
- Mineral resources.
- Air quality.
- Wildlife habitat.

The Parks and Recreation Element is an optional element of the General Plan. This Element identifies existing and potential recreational opportunities within the community. Since it is closely related to the City's open space system, integration of the three documents into one element makes good planning sense.

EXISTING CONDITIONS

The City of Kerman is located in the central San Joaquin Valley on level terrain. The closest significant topographical feature is the bluffs of the San Joaquin River, about ten miles north of Kerman. The mountains of the Coastal Range and the Sierra Nevada begin about 35 miles southwest and northeast of Kerman, respectively. The city is entirely surrounded by agricultural land mixed with farmhouses and small ranches. The surrounding agricultural land lends the effect of a greenbelt around Kerman.

Discussed below are specific issues relating to the Conservation, Open Space, Parks and Recreation Element. A more detailed description of these issues can also be found in Part 2 of this document.

Air Quality

Kerman has a moderate climate with warm summers and generally mild winters. The City is located within the San Joaquin Valley Air Basin. The closest California Air Resources Board (CARB) air monitoring station is located in Hanford, where all criteria air pollutant levels are measured. According to CARB, the San Joaquin Valley exceeds standards for two important pollutant criteria: ozone and particulate matter, and is therefore designated as a non-attainment area (meaning the Valley has not attained or achieved, required air quality standards). There are several factors which cause this to occur. They are:

1. The topography of the valley as a basin surrounded by mountains has the effect of trapping stagnant or polluted air.
2. The local climate (abundant sunshine and high atmospheric pressure) is favorable for the formation of smog.
3. The primary factor is the growth of population in the Valley. With more and more people moving to the valley, smog is produced by fossil fuel burning and emissions from

factories and other combustion processes.

Water Resources

Kerman currently obtains its water from underground supplies. The aquifer underlying Kerman has been plagued with a number of contaminants, which render certain stratas (layers) of the aquifer unuseable for domestic purposes. The primary contaminant has been uranium. The presence of this element has caused the City of Kerman to drill four new wells recently.

The United States Bureau of Reclamation reported in 1991 that the depth to groundwater in the Kerman area ranged from 80 to 100 feet. The water table is recharged primarily by water moving downhill from the watersheds of Sierra Nevada streams. Irrigation waters also help to recharge the water table. Rainfall in the Kerman area provides only a small amount of groundwater recharge.

There are no natural surface water features such as streams or lakes in the Kerman area. There are several irrigation canals which traverse the planning area. These could be given consideration for use as parkways, as development occurs around them.

Agricultural Resources

Kerman is surrounded by thousands of acres of producing cropland. Agricultural lands have provided a strong economic base for the community as well as a rural landscape and open space "system" that surrounds the City. As Kerman continues to grow, the surrounding agricultural lands are taken out of production to accommodate residential, commercial, and industrial growth.

In 1965, California adopted the Williamson Act to address the loss of agricultural lands due to urbanization. The Williamson Act provides property owners with a reduction in their property tax if they agree to maintain their land in agriculture for a ten-year period. This ensures, at least for the near-future, that agricultural lands will remain undeveloped, thereby enhancing the sense of open space around Kerman as well as continuing agricultural

production. Exhibit 5 shows properties within the Kerman Planning Area that have a Williamson Act contract.

Mineral Resources

There are no significant mineral resources within the planning area and no known mining of mineral resources has occurred in the planning area. The closest significant mineral resources consist of petroleum deposits in the Raisin City field about five miles south of the planning area. Oil wells have been extracting petroleum from this field for many years.

Soil Resources

The soils in the Kerman area are described by the Soil Survey of Eastern Fresno County, prepared by the Soil Conservation Service, Department of Agriculture (see Exhibit No. 6). The general soil map of this Survey shows three major soil groups, the Hanford, Hesperia and Traver Series, encompassing seven specific soil types in Kerman. The Hanford series consists of soils that are well-drained, fertile, moderately course textured, and are derived from recent granitic alluvium. The Hanford soils are generally located on nearly level alluvial fans. Conservation of soils is an important aspect of maintaining the development potential of certain areas as well as maintaining viable agricultural lands.

The Hesperia series consists of soils that are well-drained, moderately textured and are formed from granitic alluvium. Some of the soils in this series are saline-alkaline affected. They are generally found on alluvial fans.

The Traver series consists of soils that are well-drained that are typically saline-alkali affected. These soils are deep to moderately deep over compact silt. This series occupies young alluvial fans of the San Joaquin and Kings Rivers.

Seven specific soils are found within the context of the three major soil groups listed above. They are Hanford course sandy loam (Ha); Hesperia sandy loam, moderately deep (Hsm); Hanford sandy

loam (Hc); Hesperia sandy loam, moderately deep, saline-alkaline (Hsn); Traver sandy loam, moderately deep (Ts); Tujunga loamy sand (Tzba); and Hesperia sandy loam, shallow (Hso).

Hanford course sandy loam (Ha) is a very deep soil that is well drained and is located on alluvial fans. This soil has a Class II agricultural rating (Class I soils have the fewest limitations for agriculture; Class VIII have the most limitations for agriculture) and a Storie Index rating of 80 (A Storie Index rating of 80-100 has the greatest suitability for intensive agriculture; less than 10 has the least suitability). Limitations for urban development are moderate foundation support.

Hesperia sandy loam, moderately deep (Hsm) is a moderately deep soil that is well drained and is located on the central parts of the young fans of the Kings and San Joaquin Rivers. Under natural conditions these soils were subject to seasonal flooding and a fluctuating high water table. It has a Class II agricultural rating and a Storie Index of 90. Limitations for urban development are moderately slow permeability, moderate to severe foundation support, and moderately slow substratum permeability.

Hanford sandy loam (Hc) is a very deep soil that is well drained and is located on alluvial fans. This soil has a Class II agricultural rating and a Storie Index rating of 95. Limitations for urban development are moderate foundation support.

Hesperia sandy loam, moderately deep, saline-alkaline (Hsn) is a moderately deep soil that is well drained and is located on the central parts of the young fans of the Kings and San Joaquin Rivers. The underlying material is strongly alkaline and normally is slightly saline from accumulations of salts. It has a Class III agricultural rating and a Storie Index of 50. Limitations for urban development are moderately slow permeability, moderate to severe foundation support, and moderately slow substratum permeability.

Traver sandy loam, moderately deep (Ts) is a well-drained soil that is saline-alkaline affected. Over long periods of time, sodium salts were accumulated in the soil material. It has a Class II agricultural

EXHIBIT 5

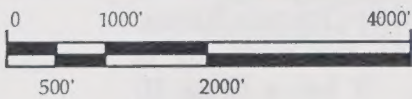
Agricultural Preserves



PARCELS ENTERED INTO
AGRICULTURAL
PRESERVE CONTRACTS
WITHIN PLANNING AREA

Base Map: Portion of Northeast quarter of the Kerman 15' Quadrangle
published by United States Geologic Survey, 1963, revised 1981.

Kerman General Plan



1 inch = 2,000 feet

--- PLANNING AREA
BOUNDARY



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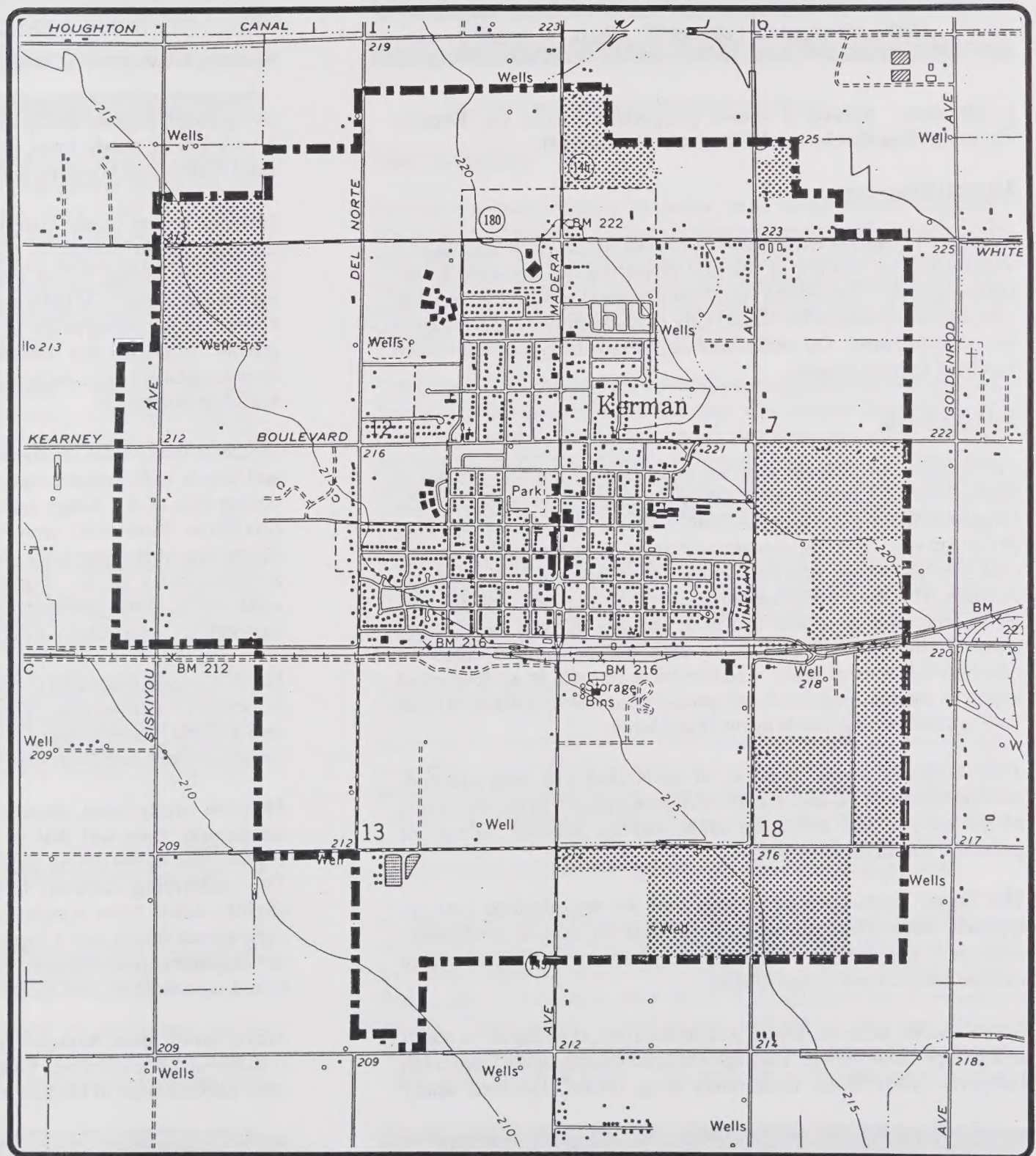


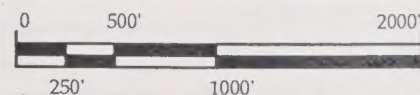
EXHIBIT 6

Soils

1. Hanford course sandy loam
2. Hanford sandy loam
3. Hanford sandy loam, silty substratum
4. Hesperia course sandy loam
5. Hesperia sandy loam, moderately deep
6. Hesperia sandy loam, moderately deep, saline-alkali
7. Hesperia sandy loam, shallow
8. Hesperia sandy loam, shallow, saline-alkali
9. Traver sandy loam, moderately deep
10. Tujunga loamy sand, 0 - 3 percent slopes

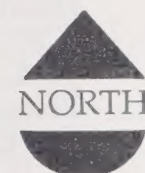
Base Map: Portion of Northeast quarter of the Kerman 15' Quadrangle published by United States Geologic Survey, 1963, revised 1981.

Kerman General Plan

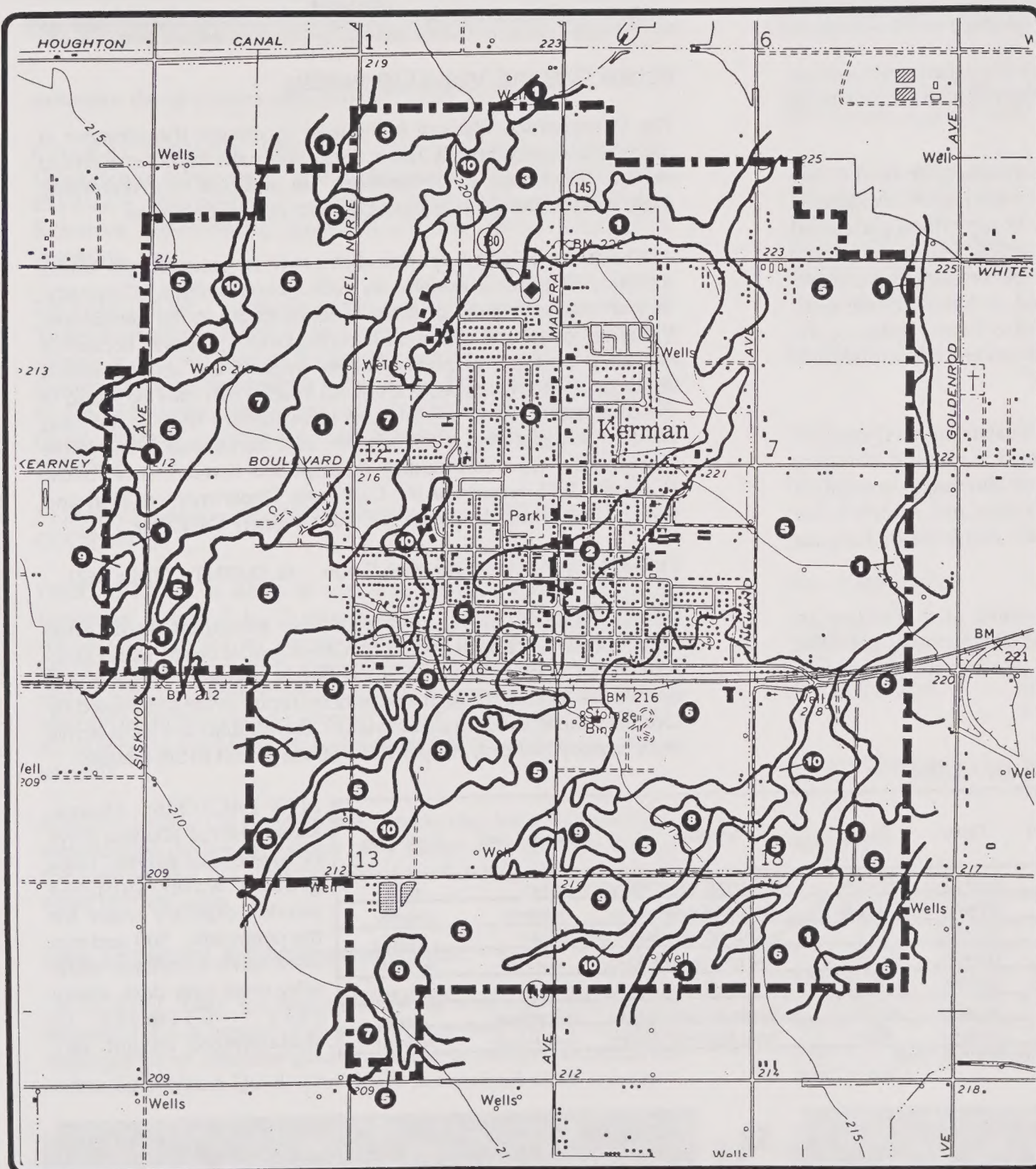


1 inch = 2,000 feet

--- PLANNING AREA
BOUNDARY



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rating and a Storie Index of 34. Limitations for urban development are moderate to severe saline-alkaline affected, high conductivity, and moderate soil pressure.

Tujunga loamy sand (TzbA) consists of excessively drained loamy sand and sandy soils that were formed in recent alluvium derived from granitic rocks. These soils normally occupy flood plains and fans of rivers and smaller streams. The material below the surface layer is mainly loamy sand to a depth of 5 feet or more, but in many places it is stratified with sand, coarse sand, or loamy coarse sand. It has a Class III agricultural rating and a Storie Index of 76. Limitations for urban development are severe for foundation support and severe for soil pressure.

Hesperia sandy loam, shallow (Hso) consists of well-drained moderately course textured soils that formed in granitic alluvium. The soil is underlain by a compact, silty layer that ranges in depth of 2.5 to 3 feet. It has a Class III agricultural rating and a Storie Index of 77. Limitations for urban development are severe for septic tanks and moderate for soil pressure.

Conservation of soil resources in the planning area is critical in maintaining the agricultural resources and development potential of differing soils. In most cases, proper grading techniques can achieve this goal.

TABLE 16
DEVELOPMENT POTENTIAL OF SOILS

Soil Type	Shrink/Swell	Streets	Parks	Irrigation	Water Retention	Landscaping
Hanford course sandy loam	low	favorable	moderate	mod. to high water-holding	high seepage	slight
Hesperia sandy loam, mod. deep	low	favorable	moderate	low to high water-holding	moderate	moderate
Hanford sandy loam	low	favorable	slight	mod. to high water-holding	high seepage	slight
Hesperia sandy loam, mod. deep, sal-alk	low	favorable	moderate	low to high water-holding	moderate	moderate
Traver sandy loam, mod. deep	low to mod.	favorable	moderate	mod. water-holding	mod. seepage	mod. to severe
Tujunga loamy sand	low	favorable	moderate	low to very low water-holding	high seepage	severe
Hesperia sandy loam, shallow	low	favorable	slight	low to high water-holding	mod. to high	moderate

Source: United States Soil Conservation Service, 1980

Natural Plant and Animal Communities

The Conservation Element is required to discuss the presence of native plants and animals and in particular, native species regarded as rare, threatened, or endangered. In addition to inventorying these species, the element must plan for their preservation.

Associations of plant species that grow in assemblages under similar ecological conditions are called communities. Generally, they are named for the dominant species found in the association. Definition of natural communities is important, not only because it identifies the types of plants that are present, but also because it indicates the habitat types and animal species that may be found in the community. Only two natural communities were found near the Kerman planning area: Valley Sink Scrub and Non-Native Grassland. The community descriptions listed below follow Holland's 1986 report for the California Department of Fish and Game (CDFG) and the State's Natural Diversity Data Base.

ELEMENT NAME: Valley Sink Scrub ELEMENT CODE: 3621

DESCRIPTION: Low, open to dense succulent shrublands dominated by alkali-tolerant Chenopodiaceae, especially *Allenrolfea occidentalis* or several *Sueda* species. Understories usually are lacking, though sparse herbaceous cover dominated by *Bromus rubens* develop occasionally. The annuals are most active from January to April; the perennials from March to September.

SITE FACTORS: Heavy, saline and/or alkaline clays of lakebeds or playas. High ground water supplies provide capillary water for the perennials. Soil surfaces often have a brilliant white salty crust over dark, sticky clay. Climate is characterized by hot, dry

summers, damp winters with long periods of tule fog.

CHARACTERISTIC SPECIES: *Allenrolfea occidentalis*, *Delphinium recurvatum*, *Distichlis spicata*, *Kochia californica*, *Lasthenia chrysantha*, *L. ferrisae*, *Nitrophilia occidentalis*, *Salicornia subterminalis*, *Sporobolus airoides*, *Sueda fruticosa*, *S. torreyana*.

DISTRIBUTION: Formerly surrounded the large San Joaquin Valley lakes (Kern, Buena Vista, Tulare, Goose) and north along the trough of the San Joaquin Valley through Merced County to the gooselands of the Sacramento Valley (Solano to Glenn County, west of the Sacramento River); but now essentially eliminated due to flood control, agricultural development, and ground water pumping.

ELEMENT NAME: Non-Native Grassland **ELEMENT CODE:** 42200

DESCRIPTION: A dense to sparse cover of annual grasses with flowering culms .2 to .5 meters high. Often associated with numerous species of showy-flowered, native annual forbs (wildflowers), especially in years of favorable rainfall. Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds.

SITE FACTORS: On fine-textured, usually clay soils, moist or even waterlogged during the winter rainy season and very dry during the summer and fall. Oak Woodland is often adjacent on moister, better drained soils.

Rare, Threatened, and Endangered Species

On March 1, 1993, the Natural Diversity Database (NDDB) was consulted for a report of occurrences of any rare, threatened, endangered, or sensitive plants, animals or natural communities within the Kerman Quad. The NDDB is a computerized inventory

available through the California Department of Fish and Game, Natural Heritage Division.

Two plant species occurrences were reported: one occurrence of *Eriastrum hooveri* (Hoover's woolly star) and one occurrence of *Cordylanthus palmatus* (Palmate-bracted bird's beak). A brief description of each species and its occurrence record, as well as its presumed current status within the Kerman planning area, is included below.

<i>Eriastrum hooveri</i>	(Jepson) Mason. "Hoover's eriastrum", "Hoover's woolly star"
Family:	Polemoniaceae
Status:	CNPS - List 1B (Rare, Threatened or Endangered in California and Elsewhere) Federal - Threatened. State - None
Flowering period:	April - June
Habitat:	Saltbush scrub, Alkaline playas
Historic Range:	Fresno, Kings, Kern, San Luis Obispo and Tulare Counties
Known Occurrence:	1979; Fresno Co., "4.7 mi. S of Kerman RR Station along Hwy. 145 (Madera Ave.)"

Discussion:

This small cyclical, ephemeral annual, of the family Polemoniaceae (Phlox family), was once fairly widespread throughout the alkaline soils of the San Joaquin Valley. This plant is often found in openings in Atriplex scrub where cryptogamic crusts have developed on the soil surface (Stebbins et al., 1992). Much of its native habitat has been converted to agriculture. It was known to exist at 23 sites throughout the San Joaquin Valley in 1986 (Taylor and Davilla).

The Fresno County occurrence of *Eriastrum hooveri* described above, lies approximately 3 3/4 miles south of the Kerman Urban Area Boundary, "on slight hummocks (where less alkaline) in alkaline plain". The habitat that supported this population of *E. hooveri* has probably been eliminated due to agricultural conversion. No habitat capable of supporting this species is expected to be found within the Kerman General Plan Update Planning Area, although habitat may exist on the KMJ (radio tower) property (2/3 mile south of the Sphere of Influence (SOI) boundary).

Cordylanthus palmatus (Ferris) J. F. Macbride. "Palmate-bracted bird's beak"

Family: Scrophulariaceae

Status: CNPS - List 1B (Rare, Threatened or Endangered in California and Elsewhere)
Federal - Endangered
State - Endangered

Flowering period: June - July

Habitat: Alkaline scrub in seasonally flooded lowlands

Historic Range: Fresno, Madera, Alameda, Colusa and Yolo Counties

Known Occurrence: 1965; Fresno Co., "6 Mi. S of Kerman (on Madera Ave.)"

Discussion:

Palmate-bracted birds-beak (*Cordylanthus palmatus*) is a hemiparasitic species in the family Scrophulariaceae (Figwort family) that has been severely impacted by the conversion of its native habitat (alkaline playas) to agriculture (Heckard 1977). The

Madera Avenue site south of Kerman was last visited in 1983 and plants were not observed. It was reported that the habitat was lost due to soil reclamation and the area was under cultivation.

Suitable habitat may exist for this species on the KMJ property approximately 2/3 mile south of the Kerman SOI.

Other Species of Concern

Another species, not reported by NDDDB, that is likely to occur in the general area is the San Joaquin Kit Fox (SJKF), a federally endangered species (J. Stebbins, pers. comm. 1993). It is known to occur on the KMJ property within one mile of the Kerman SOI. If the KMJ property supports SJKF dens, it is likely that San Joaquin Kit Fox could forage at times within the SOI. This, however, has not been previously documented.

The kit fox is endemic to central California and was once common in the southern San Joaquin Valley. Their population has declined dramatically due to habitat loss caused by urbanization and cultivation of their native habitat. The kit fox is listed as "threatened" by the State of California and "endangered" by the Federal government.

The San Joaquin kit fox is a burrow dweller and is known to occur in both of the natural communities found within the planning area. It is an opportunistic feeder, eating whatever prey species are locally abundant. Prey can include insects, birds, rodents and other small mammals.

Burrowing owl is a state-listed "Species of Special Concern" and is also known to occur at the KMJ property (J. Stebbins, pers. comm. 1993).

Park and Recreation Resources

The City of Kerman currently has six developed parksites and one undeveloped (city-owned) parksite (see Exhibit 7). Kerckhoff Park is a 5.75 acre site located at the intersection of "G" Street and Third Street. Kerckhoff is considered a neighborhood park. According to the National Parks and Recreation Service, a four acre park would be categorized as a neighborhood park, which has a service area of approximately 1/4 to 1/2 mile radius. Facilities at Kerckhoff Park include a baseball field with bleachers, swimming pool, three picnic shelters, a stage, barbecue pits, picnic tables, playground equipment and restrooms.

Plaza Park (1.3 acres) is a linear park that forms the median divider for Madera Avenue between California Avenue and C Street. It contains a number of mature trees, lawn areas, picnic tables and restrooms. Wooten Park (1.5 acres) is located at the corner of C Street and Manor Drive. It includes a playground, and a baseball diamond.

Sunset Playground (0.35 acres) is a combination park and ponding basin. It is located at the southeast corner of Sixth Street and Sunset Avenue. Vineland Playground (0.62 acres) is another park/ponding basin. It is located on Vineland Avenue, north of California Avenue. Both Sunset and Vineland parks include playground equipment.

The City recently opened Rotary Park, which consists of two baseball fields located on the campus of Kerman Floyd Elementary School. The City leases the site (about 4.5 acres) from the school district.

In addition, the City owns a 14.98 acre parcel along the south side of E Street, west of Del Norte Avenue. A narrow strip has been landscaped along E Street, however, the remaining area is undeveloped. The site is designated as a ponding basin on the city's Storm Water Drainage Master Plan.

In addition to the city's parks, the Kerman Unified School District,

Kerman Kartways (go-cart track) and the surrounding agricultural land provide recreation facilities and open space experiences.

In addition to maintaining and operating park facilities, the City's Parks and Recreation Department supervises and coordinates a wide variety of programs and activities.

Community Events

The Department helps sponsor family-oriented and special community events throughout the year, including the Harvest Festival, May Day Festival, Festival of the American Spirit, community blood drive, Annual Day of Prayer, and a toy and food drive for the needy.

Sports Programs

The City provides organized men's and women's sports leagues and youth sports leagues as well as a swimming program. A strong emphasis has been placed on community participation in the planning, organization and implementation of these programs. As these programs grow and participation increases, additional fields, personnel and facilities will be needed. Existing facilities will need renovations and there will be an increasing demand for additional staffing.

The community has been showing strong support for programs of the Recreation Department. This has been accomplished with the addition of new programs and increasing attendance in existing programs. The adult softball program attracted over 400 participants in the most recent year. The public swimming program attracted over 2,200 participants during the most recent season. T-ball, soccer, gymnastics basketball and country western dance have also had strong participation.

The City also operates a senior citizens program with a number of activities. Daily lunches are provided for a donation (typically \$1.00, although persons who cannot pay are not turned away). Other programs include bingo, movies, public transportation,

dances, birthday parties, homebound lunches and visitations, among others. Many of the daily activities are conducted at the Seniors Center at 720 South 8th Street. The center is owned by the Kerman Unified School District and is leased to the City.

Joint Use of School Facilities

In addition to City-owned park and recreation facilities, Kerman residents have access to grounds and playing fields at Kerman Unified School District (KUSD) schools. The City and the school district have executed a joint use agreement for the use of school district facilities for city recreation programs. Table 17 summarizes the sports facilities on school grounds.

TABLE 17
KERMAN UNIFIED SCHOOL DISTRICT
RECREATION FACILITIES

<u>School</u>	<u>Acres</u>	<u>Recreation Facilities</u>
Kerman-Floyd Elementary	20 ac.	Two softball diamonds (Rotary Park), 2 soccer fields, assorted playground equipment
Kerman Middle School	10 ac.	Baseball diamond, basketball courts, gym, outdoor play areas
Kerman High School	20 ac.	Baseball diamonds, softball diamonds, 8 tennis courts, basketball courts, track, football stadium, gym, volleyball courts.

Source: Kerman Unified School District, 1993.

Other Area Recreation and Open Space Facilities

Kerman Kartways: Kerman Kartways is a dirt go-cart racing track located on the east side of Madera Avenue south of the Southern

Pacific Railroad tracks.

Portugeuse Hall: The Portuguese Hall is a meeting hall with banquet facilities located on C Street between Madera Avenue and Sixth Street.

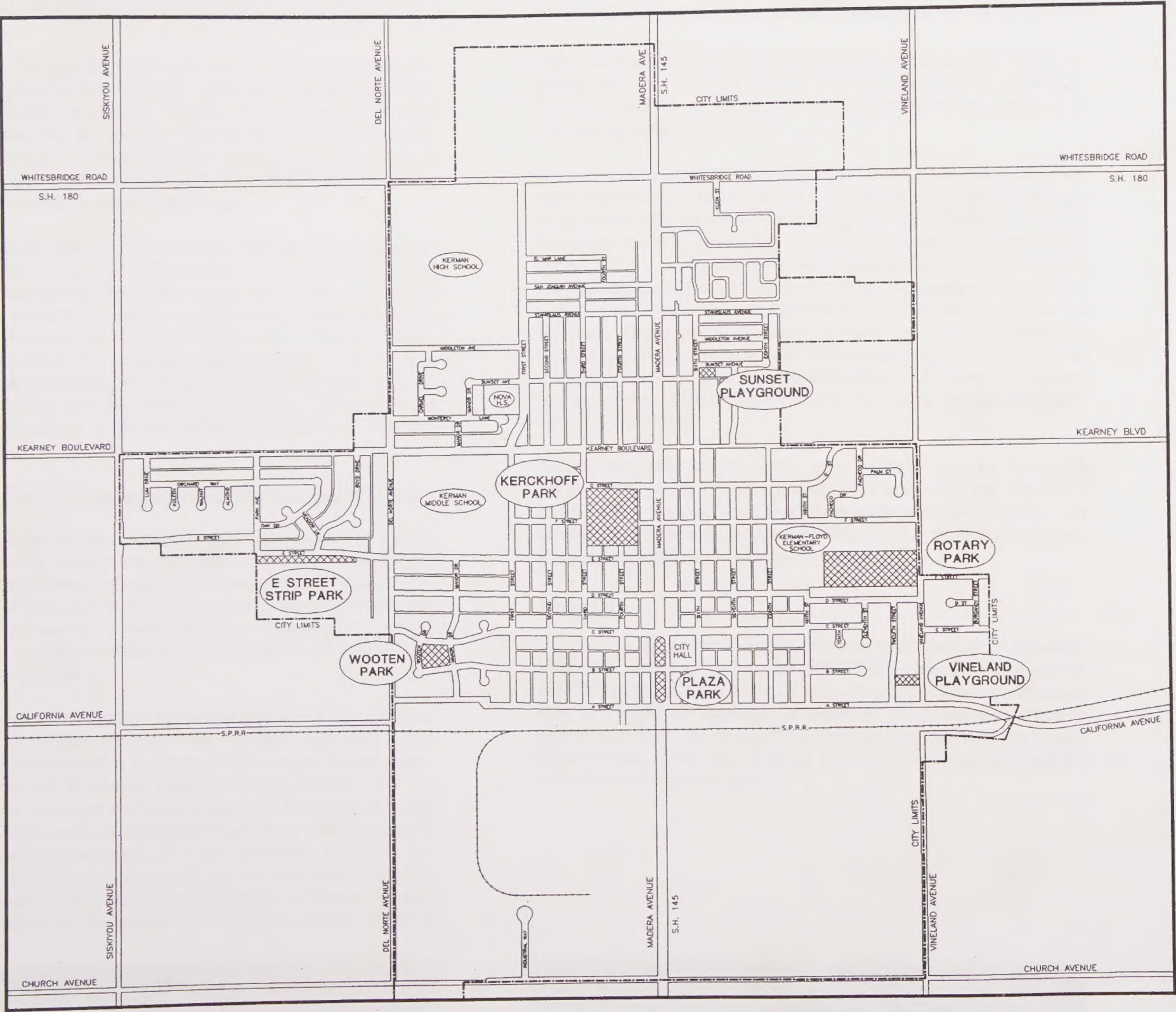
Regional Parks Facilities

There are several regional parks that are within driving distance to Kerman. Generally speaking, at a maximum, most people are willing to travel thirty minutes to get to a regional park facility, and possibly one hour if there was some type of event scheduled there, such as a church gathering, family reunion, or school function. Kerman has two regional parks operated by Fresno County within ten minutes driving time. Kearney Park is a historic 225-acre park originally developed as the estate of Fresno County pioneer M. Theo Kearney. This facility is located on Kearney Boulevard about seven miles east of Kerman. The park contains the former home of Kearney, which is operated as a museum. It is lavishly landscaped with mature trees and shrubs. The park has picnic facilities, tennis courts, soccer fields horseshoe pits, two softball fields and four playground areas.

Skaggs Bridge Park is located about six miles north of Kerman where Madera Avenue (State Highway 145) crosses the San Joaquin River. The park includes 17 acres on the bank of the San Joaquin River. It includes a large grassy area suitable for picnicking, softball and other open-field play. Skaggs Bridge Park has been suggested as the western anchor of the San Joaquin River parkway.

Roeding Park, operated by the City of Fresno is located about fifteen miles east of Kerman. This 157-acre regional park includes Chaffee Zoological Gardens, Rotary Playland (an amusement park with rides), boating and fishing lakes, Storyland (children's play area with buildings, sculptures and landscaping based on popular fairy tales). There are also picnic tables, barbeque pits and tennis courts.

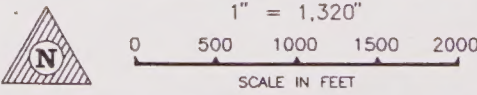
The Fresno West Golf Course is an 18-hole course on Whitesbridge Road about ten miles west of Kerman. The course is operated by



EXISTING PARKS

CITY OF KERMAN
GENERAL PLAN UPDATE

EXHIBIT 7



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Fresno County. The Mendota Wildlife Area is a multi-purpose state wildlife area located about eighteen miles west of Kerman on the south side of Whitesbridge Road. This facility was first established in 1954 as a habitat area for wildlife - primarily migrating waterfowl. Hunting is permitted at certain times and some areas are grazed by cattle. Additional land acquisitions since 1954 have increased Mendota Wildlife Area to over 12,000 acres.

Two state ecological reserves also lie west of Kerman. The Kerman Ecological Reserve is located seven miles west of Kerman on the north side of Whitesbridge Road and covers over 1,700 acres. Alkali Sink Ecological Reserve is located 12 miles west of Kerman on the south side of Whitesbridge Road and covers over 900 acres. These reserves were established to preserve native habitat - human use is generally not encouraged. However, the value of these sites in preserving the valley as it once was is significant. Exhibit 8 shows the general location of regional parks, recreation and reserve facilities.

Conservation, Open Space, Parks and Recreation: Future Needs

A primary objective of this Element is the establishment of criteria that will guide the acquisition and development of future open space areas. These standards should be realistic and represent the actual amount of area and facilities necessary to meet the needs and desires of the community. These open spaces can be provided in a variety of ways, and do not need to be under the control of the City to meet Kerman's needs.

State Government Code Section 66477 (b) requires a minimum of three acres of open space for every one thousand residents. Each jurisdiction can require that a maximum of five acres of open space be set aside per one thousand residents if the current land use exceeds the three acres per thousand standard. Presently, Kerman has a total of 14.02 acres of developed parkland. With a current (1993) estimated population of 6,323 persons, Kerman has approximately 2.22 acres of park land per one thousand residents. To meet the goal of three acres per thousand residents, Kerman needs to add 4.95 acres, for a total of 18.97 acres. Development of

even one-half of the "E" Street Park site would surpass this goal, giving the city a total of 21.5 acres of developed parkland. However, over time, the acreage of parkland must be increased to meet the growing population.

Projections of a community's open space and park needs involves many factors. Population, income, education, accessibility, and age must all be considered in determining the correct amount of open space/parks for a community. In this case more is not necessarily better. Park acquisition must strike a balance between use and the maintenance available to sustain the park. Generally speaking, city parks cost approximately \$3,500 to \$4,000/acre per year to maintain. A city may have 10 acres of open space per 1,000 persons; however, if this acreage is not maintained properly, its value as usable open space will be greatly diminished. As Kerman acquires more parkland, it must also dedicate the resources to adequately maintain that land.

Americans today are spending more of their time in recreation leisure activities than ever before. This emphasis has created a much higher demand than ever for quality open space, parks and recreation facilities. In response to this, cities must designate areas for such uses, before development occurs.

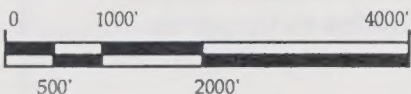
Parkland

In order to determine the type, location and amount of parkland that will be required by Kerman within the 20-year planning period, population projections are required. Two population projections (low and high) are displayed in Table 18. The table shows that as population increases, so does the need for facilities and programs. Table 18 also shows the required number of acres of parkland for each of the projections listed.

EXHIBIT 8

Regional Parks, Open Space & Recreation Facilities

Kerman General Plan



1 inch = 2,000 feet



--- PLANNING AREA
BOUNDARY

COLLINS & ASSOCIATES
PLANNING CONSULTANTS

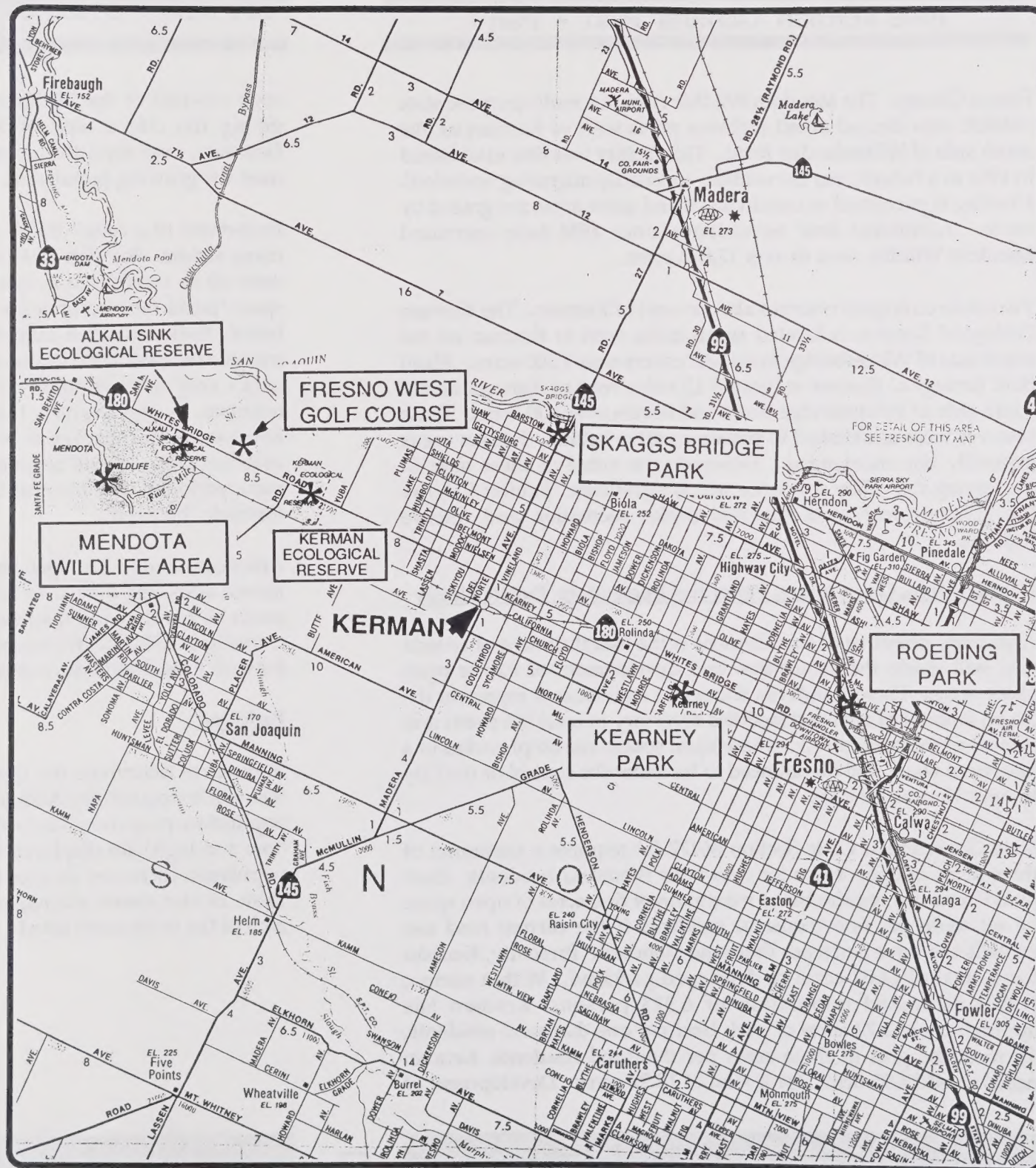


TABLE 18
PROJECTED PARKLAND NEEDS

<u>Low Population Projection</u>			<u>High Population Projection</u>	
Year	Population	Required Acreage	Population	Required Acreage
1993	6,323	18.97	6,323	18.97
1998	7,550	22.65	8,205	24.62
2003	9,014	27.04	10,648	31.94
2008	10,763	32.3	13,818	41.45
2013	12,851	38.55	17,931	53.79

Source: Collins & Associates, 1993

The ability to forecast population growth allows for the planned acquisition and development of park sites. As stated above, State standards require a minimum of three acres per one thousand residents. With only 14.02 acres of city-owned park land, Kerman currently falls short of its existing open space need by 4.95 acres. Facilities must be planned, developed, and maintained to ensure adequate recreational facilities for existing and future residents.

Accessibility

Another important factor in the planning of future parks is to insure that parks are accessible to all citizens of the community. For instance, although a city may currently meet the standards regarding the amount of parkland required; the existing park sites may not be easily accessible from all areas of the community.

Exhibit 9 shows the location of existing City-owned park facilities and their service areas. Service area dimensions are those provided by the National Parks and Recreation Association. Generally, a community park will have a one-half mile service area, and a neighborhood park has a one-quarter mile service area. Exhibit 9

indicates that there is a lack of park facilities in the northwest and northeast quadrants of the City. Some of Kerman's new and proposed growth is occurring in these quadrants. In order to accommodate these areas with open space and park areas, the City must begin to evaluate future sites for these uses.

As part of this evaluation process of future park sites, the City must first evaluate its existing programs and facilities. To accomplish this, the City of Kerman mailed out 1,100 surveys (along with utility bills) to the residents of Kerman in April of 1993. Of those surveys 100 were returned. This represents a 9.1% response rate, which is considered fair for this type of survey. The intent of the survey was not only to receive input on existing parks and recreation facilities and programs, but also to find out the interests of the community in regards to future programs and facilities.

A review of the survey reveals that 57% of respondents are satisfied with the city's park facilities while 25% were dissatisfied; 17% had no opinion. Sixty two percent of respondents were satisfied with maintenance of city parks while 21% were dissatisfied; 17% had no opinion on this question. Concerns with vandalism, littering and noise were expressed by respondents as some of the more pressing problems existing at city parks. Sixty-one percent of respondents said they could not support a tax increase to pay for additional parks and recreation facilities while 29% said they could support such an increase. Several other questions were asked on the survey providing a sampling of viewpoints on parks and recreation in Kerman. Complete survey results can be found in Appendix A of the Conservation, Open Space, Parks and Recreation Element.

ISSUES, POLICIES AND ACTION PROGRAMS

This portion of the Element incorporates policies into implementing action programs. These policies are a guide to the future development of parks and recreation facilities as well as the preservation of Kerman's natural resources.

The first part of the Plan is the identification of issues relating to conservation, open space, parks and recreation facilities. The second part is the identification of policies that will guide future decisions regarding these issues. The third part of the Plan is the action program. These programs will serve to implement the policies. For example, the action program will provide a framework for the development of future capital improvement programs and department budgets.

GOALS, OBJECTIVES, AND ACTION PROGRAM

The following goals, have been used as a guideline in the preparation of this Element:

1. CONSERVE, RESTORE, AND ENHANCE SIGNIFICANT NATURAL, CULTURAL AND HISTORIC RESOURCES IN KERMAN.
2. CREATE AND PRESERVE OPEN SPACE IN THE KERMAN AREA TO MEET THE NEEDS OF THE COMMUNITY NOW AND IN THE FUTURE.
3. DEVELOP A HIGH QUALITY PUBLIC PARK AND RECREATION SYSTEM THAT IS CONVENIENT, ACCESSIBLE AND AFFORDABLE TO ALL SEGMENTS OF THE CITY.
4. IMPLEMENT THE CONSERVATION, OPEN SPACE AND PARKS AND RECREATION ELEMENT THROUGH A COMBINATION OF PUBLIC AND PRIVATE FUNDS, REGULATORY PROCESSES, AND INNOVATIVE

STRATEGIES.

5. PRESERVE THE EXISTING SCENIC QUALITIES OF THE COMMUNITY BY ADOPTING STANDARDS REGULATING ENTRYWAYS, VIEW PRESERVATION AND LANDSCAPING.

A. AIR QUALITY

The City of Kerman exceeds two important air pollution standards - ozone and particulate matter. As growth occurs, more smog is produced by fossil fuel burning and emissions from factories. The City must encourage development that will minimize vehicular emissions by providing an adequate circulation system.

1. **POLICY:** Participate in the regional planning efforts to meet air quality goals by working to improve air quality for the entire planning area.

ACTION:

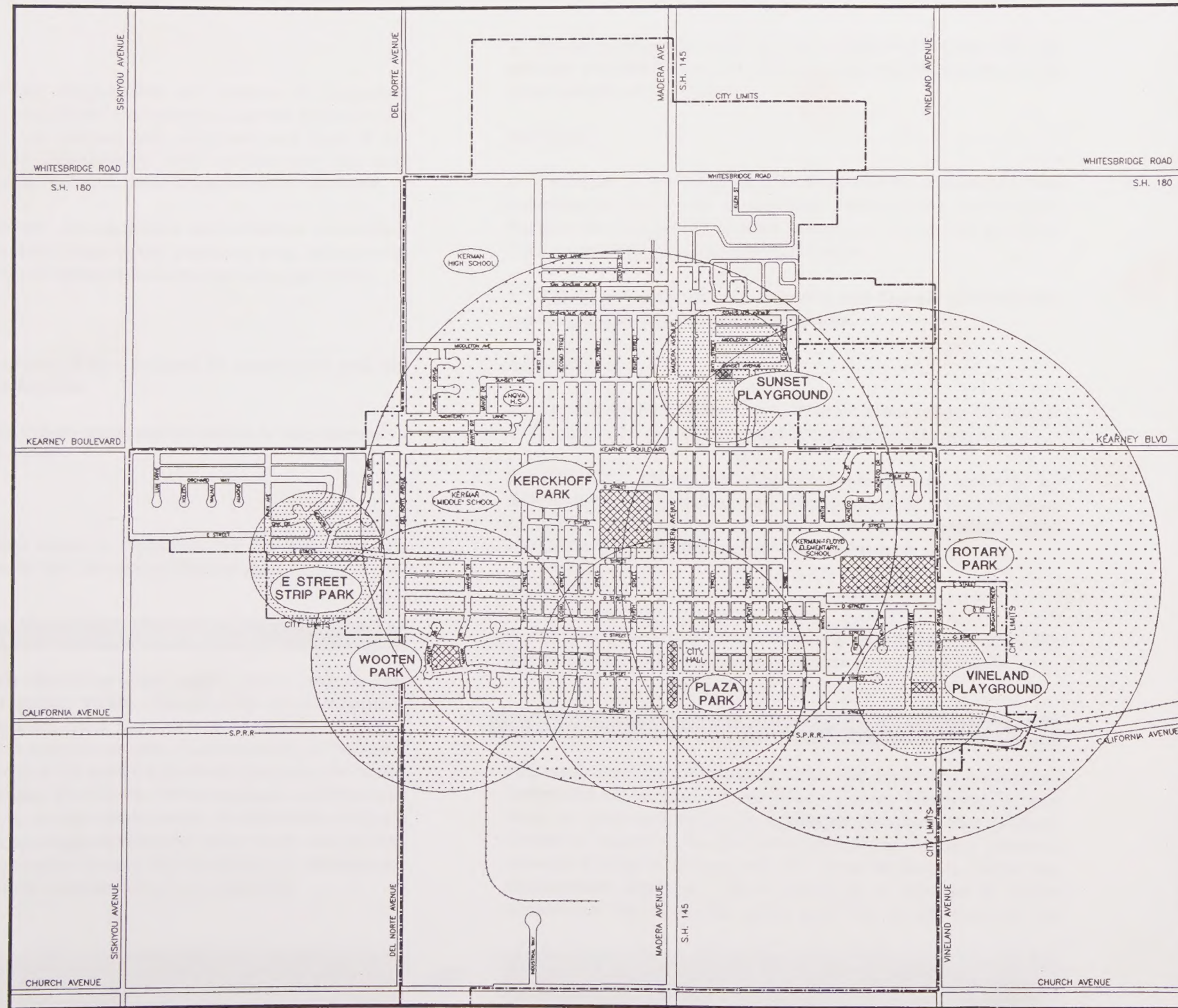
- a. The planning and public works departments will send proposed development plans to the San Joaquin Valley Unified Air Pollution Control District for review of potential air pollution impacts.

2. **POLICY:** Consider traffic flow in the planning of residential, commercial and industrial developments.

ACTION:

- a. The planning and public works departments will review all new projects to insure that traffic flow is not unnecessarily impeded, thereby causing increased vehicle-related air emissions.

3. **POLICY:** Maintain adequate roadway levels of service (LOS) to avoid congestion which contributes to the air pollution problem.



EXISTING PARKS
AND
THEIR
SERVICE AREAS

CITY OF KERMAN
GENERAL PLAN UPDATE

EXHIBIT 9



0 500 1000 1500 2000
SCALE IN FEET

COLLINS & ASSOCIATES
PLANNING CONSULTANTS

ACTION:

a. The Public Works department will review all proposed development projects to insure that roadway service levels do not fall below Level C for arterials and collectors and Level B for intersections. The department will utilize gas tax and transportation funds to maintain these transportation standards.

4. POLICY: Develop an organized and efficient circulation system to reduce vehicle trips in the planning area, idling time, intersection delays, and other emissions-producing activities.

ACTION:

a. The City shall review all new projects for consistency with the adopted Circulation Element.

5. POLICY: The City shall encourage residents to use alternative modes of transportation.

ACTION:

a. The City will seek funds to implement the city-wide bikepath system consistent with the Circulation Element map.

B. WATER QUALITY AND CONSERVATION

The City of Kerman obtains its water supply from a vast aquifer underlying the San Joaquin Valley. The quantity of water appears to be adequate, however, there have been some quality problems particularly related to uranium content. Certain stratas of the water table underlying Kerman are unfit for domestic purposes due to the contamination problem. The City has been required to drill several new wells recently to obtain usable water. In the future, Kerman must provide for long-range community water needs and protect water quality and quantity. It must also maximize the efficient use and conservation of the community's water resources.

1. POLICY: Promote a community awareness program that will educate the community in water-saving methodologies at the home and the work place.

ACTION:

a. The Public Works department will provide the community with information brochures containing water-saving techniques. Further the department should prepare a Water Conservation Ordinance for adoption by the City Council.

2. POLICY: Require the use of native and drought-tolerant new landscaping in existing and future parks.

ACTION:

a. Implementation of the City's Water Conservation Ordinance shall require the use of native and drought-tolerant species.

3. POLICY: Allow for adequate groundwater recharge by developing storm ponding and retention basins where feasible. In some areas these ponds or basins can be incorporated into a recreational area or used as wildlife habitat area.

ACTION:

a. The Engineering Department shall implement the policies of this Element with regard to locations of future park/pond basins.

C. HISTORICAL RESOURCES

Although the City of Kerman does not have any structures designated as "historic" by the Fresno County Historical Society, there are some architecturally significant structures that enhance Kerman's identity. Several structures along Madera Avenue, between California Avenue and "G" Street display an interesting architectural character. These buildings, in contrast to newer commercial development, come right out to the back of the

sidewalk, helping to create a pedestrian shopping atmosphere. Contrast this with most new commercial development where a parking lot often surrounds the building.

1. POLICY: Work with developers and architects in creating new buildings and renovating old buildings in a manner that is sensitive to the architectural character of the surrounding neighborhood.

ACTION:

a. The Planning Department, through the site plan review process shall encourage project design that complements the character of the surrounding neighborhood. The Department shall revise application forms to require applicants to state how their project "fits in" with the character and architecture of the surrounding area.

D. OPEN SPACE RESOURCES

The City of Kerman and its surroundings have locally significant natural resources that must be preserved. Chief among these natural resources are the surrounding agricultural lands and the city's outdoor recreation areas. As the city grows, increased pressure to develop these areas can result in conflicts which may lead to the permanent loss of these resources. The City will designate some of these areas for open space uses so that these precious resources can be conserved.

1. POLICY: Preserve and protect agricultural lands as a means for providing open space and for the managed production of resources.

ACTIONS:

a. This policy will be implemented through adoption of the Land Use Element and Land Use map.

b. The Planning Department shall conduct an annual review of

cancelled Williamson Act contracts and development proposals on agricultural land within the City Limits and Sphere of Influence.

2. POLICY: Develop buffers and transition areas between urban uses and agricultural land to reduce incompatibility issues that are associated with cultivation, pest control and harvesting of crops.

ACTION:

a. Adoption of the Land Use Element and Land Use map will provide the implementation of this policy.

3. POLICY: Encourage owners of agricultural parcels that are not within the 2013 growth boundary of Kerman's Land Use Element to enter the agricultural preserve program.

ACTION:

a. Adoption of the Land Use Element will provide the implementation of this policy.

4. POLICY: Promote infilling and increase overall residential densities in the City of Kerman to reduce the rate of urbanization of surrounding agricultural lands.

ACTION:

a. Adoption of the Land Use Element will provide the implementation of this policy.

5. POLICY: Establish and maintain "hard edges" around Kerman that define where urbanization stops and agricultural open space begins.

ACTION:

a. Where appropriate, the City will discourage zoning requests in the Sphere of Influence and surrounding County areas to permit

further parcelization for development of large lot residential purposes ie; ranchettes. The City will also implement the annexation policy described in the Land Use Element (Policy C-3).

E. DESIGNATION OF ADEQUATE FACILITIES

The City's General Plan must designate adequate recreational facilities for future development. The Land Use Element and this Element must provide locations for the future development of conservation, open space, parks and recreation facilities. If adequate sites are not designated in advance, the City will continue to grow with no property set aside for these uses.

1. POLICY: Maintain compliance with adopted City park standards now, and as the City grows.

ACTION:

a. The City shall review and, if necessary, increase its park impact fees in order to insure that it maintains its ratio of 3 acres of parkland per 1,000 people.

2. POLICY: Acquire and develop adequate park sites to serve future City growth.

ACTION:

a. The City shall use park development impact fees towards acquiring and developing new park sites.

b. Subdivisions that are required to provide neighborhood subdivision parks shall be processed as a Planned Residential Development Combining District. In order to facilitate the installation of a neighborhood subdivision park, the City will entertain the creation of residential lots that are less than the minimum lot size of the underlying residential zone district.

3. POLICY: Provide a variety of park sites and recreational

facilities to accommodate the City's diverse population.

ACTION:

a. Adoption of this Element will provide implementation of this item.

4. POLICY: Acquire park sites in the north and east parts of Kerman.

ACTION:

a. Adoption of this Element and the Land Use Element will provide implementation of this item.

5. POLICY: Plan for the acquisition of parks prior to urban growth and development. These lands may be acquired and left vacant until funding for development is available.

ACTION:

a. Adoption of this Element and the Land Use Element will provide implementation of this item.

6. POLICY: Encourage private or commercial development of recreational opportunities such as racquetball courts, golf, commercial softball, etc., that are available to the public. Development of a softball complex was voiced at public workshops on the development of the General Plan.

ACTION:

a. The City will encourage the development of private recreation facilities.

7. POLICY: Work with Fresno County in the acquisition of regional park facilities.

ACTION:

a. The City will assist Fresno County in the designation and location of future regional open space, parks and recreation facilities that may benefit the residents of Kerman.

8. POLICY: Add 39.77 acres of conservation, open space and parks and recreation area by the year 2013.

ACTION:

a. Adoption of this Element and the Land Use Map will provide implementation of this item.

9. POLICY: Develop an "adopt a park" program throughout the City.

ACTION:

a. The parks and recreation department shall implement an "adopt a park" program in which private citizens or organizations (ie; service clubs, churches, scouting groups, etc.) help with the maintenance of open space, parks, and recreation facilities. The Department should contact other cities who are successfully operating similar programs.

10. POLICY: Encourage donations of land and/or money towards the acquisition, development or maintenance of parks and recreational facilities.

ACTION:

a. The City shall seek out donations of land or money towards park facilities. The City may announce these efforts in recreation schedules, telephone book schedules, plaques or notices at existing parks, etc.

11. POLICY: Coordinate efforts to acquire and develop park and recreational facilities with the Kerman Unified School District to insure that there is no unnecessary duplication of facilities or

programs.

ACTION:

a. The City of Kerman shall coordinate the development of recreation facilities with the Kerman Unified School District.

F. PARK LOCATION AND DESIGN

(For specific locations of future parks see, "Plan Recommendations" on page 67)

The City of Kerman currently does not have an adequate distribution of park and open space facilities throughout the City. Active park sites and passive open space areas should be accessible to all segments of the community.

1. POLICY: Design park sites that fulfill the open space, passive and active recreational needs of all the citizens of Kerman.

ACTION:

a. Prior to the design of each new park, the City shall conduct a public hearing to receive input from citizens regarding the design of the park.

2. POLICY: Locate future parks in such a way as to be accessible and available to all the citizens of Kerman.

ACTION:

a. Adoption of this Element and the Land Use Map and its policies will provide implementation of this policy. The City must observe this policy when considering the location of new parks.

3. POLICY: Locate park and recreational facilities so that they do not conflict with adjacent land uses.

ACTION:

a. Adoption of this Element and its policies will provide implementation of this policy. Factors to consider include avoiding streets with high traffic, industrial uses, and noise sensitive uses.

4. POLICY: Consider the design of parks that double as stormwater retention/detention facilities.

ACTION:

a. Most of the new park sites designated in Exhibit 10 coincide with ponding basins proposed by the Stormwater Master Plan.

5. POLICY: Fencing and landscaped buffers shall be used to minimize any negative impacts a park may have on an adjacent residential neighborhood.

ACTION:

a. The Planning Department will review all park plans to insure that any negative impacts on surrounding properties are minimized. Additionally, the public hearing required under Policy #1 will give neighboring property owners the opportunity to voice their concerns on this matter.

6. POLICY: When possible, locate community parks on arterial roadways and neighborhood parks on collector streets to ensure adequate access for the community.

ACTION:

a. Adoption of this Element and the Land Use Map will provide implementation of this policy.

7. POLICY: All parks should be designed to meet the needs of the handicapped.

ACTION:

a. The Building Department shall review plans for proposed facilities for compliance with handicap/accessibility requirements of the Uniform Building Code.

8. POLICY: New subdivisions of forty parcels or more shall incorporate a neighborhood subdivision park into the project. Said park shall be landscaped and irrigated.

ACTION:

a. The Recreation Department shall review new subdivisions with 40 lots and more to ensure compliance with this requirement.

b. The Planning Department shall prepare design standards for neighborhood subdivision parks.

c. Subdivisions that are required to provide neighborhood subdivision parks shall be processed as a Planned Residential Development Combining District.

9. POLICY: Parks and other facilities that may require a significant amount of night lighting, such as ball parks and tennis courts, should be designed in such a way as to minimize the impacts of lighting on the surrounding neighborhood.

ACTION:

a. The Planning Department shall review lighting schemes for all projects.

10. POLICY: Parks that incorporate storm water detention or retention basins should consider design aspects that involve safety, aesthetics, and utility.

ACTION:

a. The City Engineer shall review future park sites for potential

park/pond facilities in relation to the City's storm drainage master plan.

11. POLICY: Park design shall incorporate the use of berms and small hills where appropriate to provide relief to the otherwise flat terrain of Kerman.

ACTION:

a. City staff shall review the grading plans of all park sites to insure that areas of bermed landscaping are provided. Earth moved from ponding basins can provide a ready source for berms and hills.

12. POLICY: Parking lots in new City parks shall be landscaped per current City Zoning Ordinance parking lot landscaping requirements. Furthermore, these parking lots can be used as an example of Zoning Ordinance parking standards for private developers.

ACTION:

a. The Planning Department shall review parking lot design in new parks to insure that they meet Zoning Ordinance requirements.

G. PARK ACQUISITION AND FUNDING

Issues

Adequate funds are the major obstacle in developing and operating park and recreation facilities. With the competition for state and federal dollars, there is a need to find new and expanded sources of funds for development. Cities must work to develop more effective finance mechanisms to meet the growing needs of the community. Kerman's main source of park funding is the City's "Quimby Act Fee". The Quimby fee permits the City to levy a fee against each new dwelling unit. Funds derived from this fee are placed into an account used solely for park acquisition and development. Since the 1987-88 fiscal year, the account has accumulated \$92,926.

Revenues have averaged \$15,487 per year during this time. Actual revenues have ranged from a low of \$1,000 in 1987-88, to a high of \$49,050 in 1989-90. As of this writing the parks development account is in deficit due to the construction of Rotary Park.

Other financing mechanisms available for park acquisition and development include: 1) Proposition 70 monies, 2) Redevelopment tax increment funds, and 3) Landscaping and Lighting Act of 1972 allows the creation of assessment districts.

Passage of Proposition 70, along with earlier park bond propositions, has made monies available for the construction of park, educational and recreation facilities, and acquisition of lands for parks, nature preserves and open space. Some of these funds will automatically accrue to the City of Kerman while other funds are awarded through a competitive selection process. Redevelopment Law allows cities to utilize tax increment revenue to finance land acquisition for public purposes; construction of public facilities, such as parks, sewers and streets; and administration.

Should the Kerman City Council, who also serves as the Redevelopment Agency, wish to construct major park and recreation improvements, tax allocation bonds could be issued. These tax allocation bonds would provide the City with money to finance projects in the Redevelopment District. The debt on the bonds would be paid by tax increment revenue generated in the years following the issuance.

The Landscaping and Lighting Act of 1972 can be used to finance the construction of landscaping, lighting and park and recreational improvements, and the maintenance and servicing of any of these improvements. The Act provides for the creation of a district which can be broken down into zones. A zone can be exempted from the district or assessed differently based on the level of benefit to properties within the zone. This financing mechanism is an excellent means of maintaining and servicing the common open space and recreation improvements in each residential development. Another option would be to consider forming a

maintenance district which encompasses the entire community; however, the funds generated would only apply to the the maintenance of public improvements as specified by the City.

1. POLICY: Kerman shall continue to require developers to pay park impact fees (Quimby fees) or dedicate land in lieu thereof. The State of California adopted Section 11546 of the Business and Professional Code which allows a jurisdiction to require the dedication of parkland by a subdivider, or in lieu of dedication, to pay a fee of equivalent value.

ACTION:

a. The City shall annually review its fees for recreational programs, park lands and rentals to insure that they are sufficient to finance future park needs. Areas that could be considered for review include:

- Charging user fees for use of a facility or participation in an activity,
- Entrance fees for admission to a large park or other developed recreation area,
- Charging rental fees for the use of recreation equipment or property, and
- Admission fees can be charged for special events, exhibits, or rallies.

2. POLICY: Ensure that the City of Kerman receives its full share of federal and state grant funds including matching and competitive grants. The City shall also seek out available charitable contributions for parks and open space facilities.

ACTION:

a. The City shall apply for available state and federal grants as they become available.

b. Kerman should explore securing gifts from foundations and individuals to support special interest recreation programs or park projects.

3. POLICY: Kerman should explore the financing of park and recreational facilities through the use of tax-increment funds, generated by the sale of tax-allocation bonds.

ACTION:

a. The City shall conduct a feasibility study of financing park and recreation facilities by the sale of tax-allocation bonds.

4. POLICY: Kerman should explore the opportunities to enter into joint powers agreements with other agencies to share the costs of park and recreation facilities development and maintenance.

ACTION:

a. The City shall contact the Kerman Unified School District and Fresno County Parks Department to discuss a joint powers agreement for the sharing of park and recreation facilities.

5. POLICY: Kerman should utilize, where appropriate, landscape and lighting districts to maintain parkways, landscaped medians and private parks.

ACTION:

a. Where appropriate, the City shall require proposed subdivisions to establish landscape and lighting districts to maintain open space areas.

PLAN RECOMMENDATIONS

The City of Kerman currently is not meeting the overall acreage requirement standards (3 acres per 1,000 residents) for open space. In addition to not providing an adequate amount of open space, the existing park locations are not optimally accessible to all the citizens in the City. Therefore, this Element is proposing several new park locations. To implement Plan policies, the following recommendations are proposed for implementation. Exhibit No. 10 provides the generalized locations of proposed future conservation, open space, parks and recreation facilities. Most of the future park sites are planned to be combined with proposed ponding basins designated by the Storm Drainage Master Plan. Each of these areas is numbered to correspond with the following discussion.

Site No. 1: Site 1 is the 14.98 acre site currently owned by the City and designated as a ponding basin. This site could be designed as a passive park, to be used for activities such as walking, picnicking, etc. A narrow portion of this site, along E Street has already been landscaped.

Site No. 2: Site 2 is a proposed 16 acre combination park/ponding basin, located in the northeast portion of the planning area, north of Kearney Blvd. and east of Vineland Avenue. The site could be designed to accommodate both active and passive recreational activities.

Site No. 3: Site 3 is a 10 acre combination park/ponding basin located north of Whitesbridge Road and west of Madera Avenue. Except for the Kerman Shopping Center, this area is currently undeveloped. However, as development (especially residential) occurs in this sector, a park facility will be needed. A park in this area would remove the need for children to cross the state highway to reach a park.

Site No. 4: Site 4 is a proposed park/ponding basin located on the north side of California Avenue, east of Vineland Avenue. New development is occurring in this area, increasing the need for a local park. This park could be designed to accommodate active as well as

passive recreational activities.

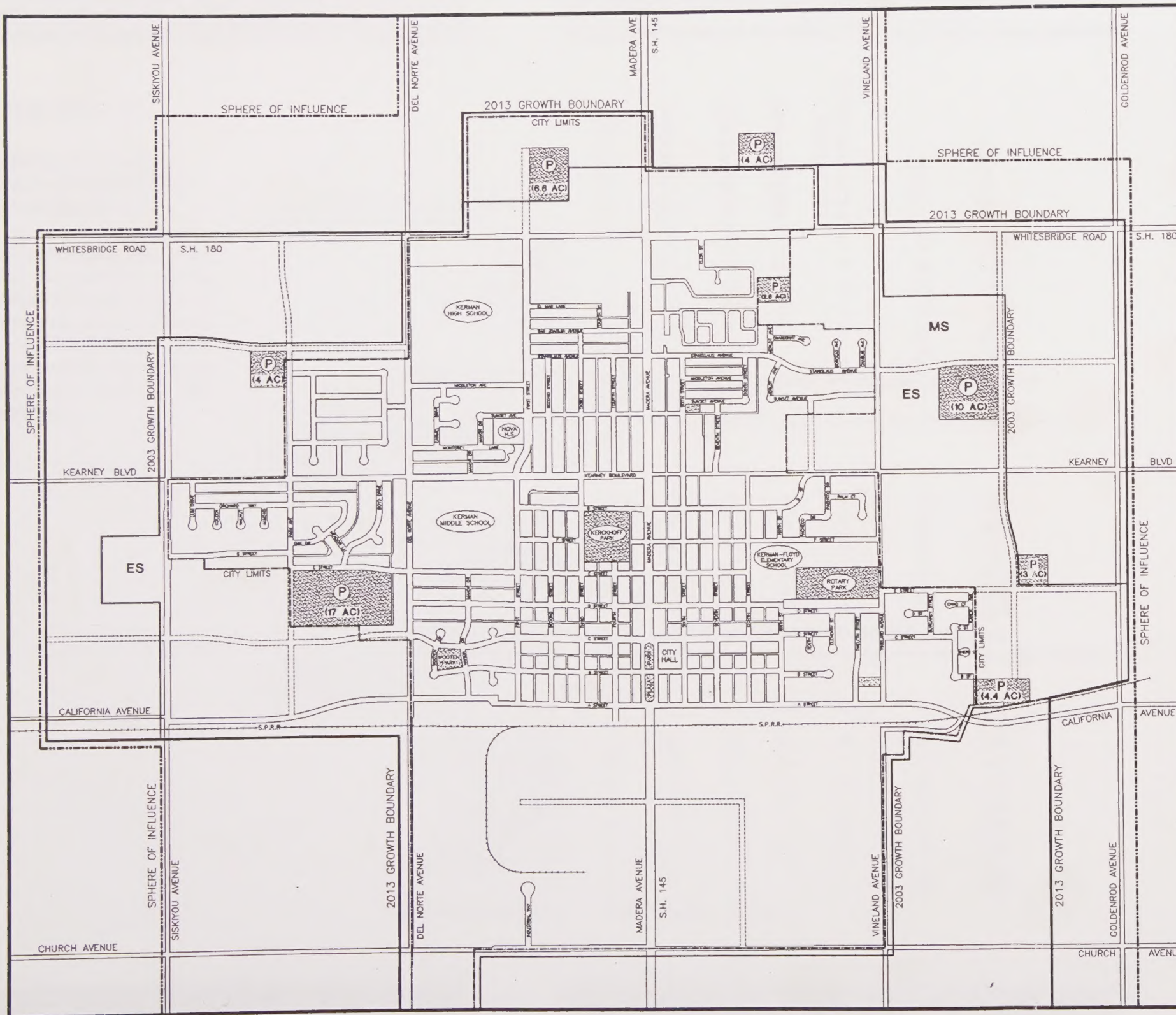
Site No. 5: Site 5 is a 6 acre park/ponding basin located north of Whitesbridge Road and east of Madera Avenue. The site could be designed as a passive park. Given its location, this park would not be developed for some time.

Site No. 6: Site 6 is a 6 acre park located within the area bounded by Kearney Boulevard, Del Norte Avenue, Siskyou Avenue and Whitesbridge Road. This park could be designed for active recreation uses such as softball and basketball.

Site No. 7: Site 7 is a 3 acre park located on the east side of the community south of Kearney Boulevard and east of Vineland Avenue, along the E Street alignment. This park could be designed for either active or passive recreational activities.

CONCLUSION

In conclusion, the Conservation, Open Space, Parks and Recreation Element will provide guidelines for the provision of convenient, well-equipped, and maintained sites and facilities, conservation of natural resources, and a comprehensive and quality program of recreational activities and services for all citizens of the community. The implementation of the Plan's goals and objectives will contribute to and maintain the quality of life that exists in the City of Kerman.



GENERALIZED FUTURE PARKS & RECREATION FACILITIES



EXISTING PARK SITE



PROPOSED PARK SITE

MS PROPOSED MIDDLE SCHOOL

ES PROPOSED ELEMENTARY SCHOOL

BOUNDARIES

CITY LIMITS (EXISTING)

SPHERE OF INFLUENCE (EXISTING)

2003 GROWTH BOUNDARY

2013 GROWTH BOUNDARY

CITY OF KERMAN GENERAL PLAN UPDATE

EXHIBIT 10



1" = 1,500'
0 500 1000 1500 2000
SCALE IN FEET

COLLINS & ASSOCIATES
PLANNING CONSULTANTS

APPENDIX A

1993 KERMAN PARKS,
RECREATION & OPEN SPACE
SURVEY RESULTS

The City was divided into four quadrants for the purpose of this survey. Results are shown by area of the survey respondent, eg: southeast, northwest, etc. Respondents who did not indicate where they live are shown under the "Location Not Specified" category.

1. Satisfaction with availability of
parks & recreation facilities:

	SOUTHEAST	SOUTHWEST	NORTHEAST	NORTHWEST	LOCATION NOT SPECIFIED	TOTAL	PERCENT
Very	3	8	1	0	0	12	12%
Satisfied	7	21	1	12	3	44	45%
Unsatisfied	1	7	0	5	6	19	19%
Very unsatisfied	1	1	0	2	2	6	6%
No opinion	4	8	1	2	2	<u>17</u>	<u>17%</u>
						98	100%

Additional Comments:

1. Park isn't open at 7am as posted. If it's not going to open at 7, then change posted time!

2. Satisfaction with the maintenance
and upkeep of parks & recreation
facilities:

Very	2	9	1	2	1	15	16%
Satisfied	7	23	1	10	3	44	46%
Unsatisfied	1	3	0	2	5	11	11%
Very unsatisfied	1	3	0	4	2	10	10%
No opinion	5	6	1	2	2	<u>16</u>	<u>17%</u>
						96	100%

Additional Comments:

1. Very unsatisfied with restrooms at Kerckhoff (two responses).

3. What facilities/programs do you
make use of most often:

Sports programs	3	14	0	16	4	37	26%
Recreational classes	0	3	0	2	1	6	4%
Sports fields	2	6	1	4	3	16	11%
Swimming pool	0	8	2	5	4	19	13%
Playgrounds	4	7	1	6	4	22	15%
Passive park area	5	12	1	3	5	26	18%
Senior Center activities	3	9	1	2	2	<u>17</u>	<u>12%</u>
						143	100%

Additional Comments:

1. There are none in Kerman.

1993 Kerman General Plan • Part 1

CHAPTER 4 • Conservation, Open Space, Parks and Recreation Element

5. What problems do you think currently exist in the City's park facilities?

	SOUTHEAST	SOUTHWEST	NORTHEAST	NORTHWEST	LOCATION NOT SPECIFIED	TOTAL	PERCENT
Noise	3	2	1	1	1	8	7%
Littering/vandalism	6	23	2	9	9	49	42%
Not enough facilities	4	12	0	7	3	26	22%
Parks not close enough	1	4	0	3	1	9	8%
Facilities in poor condition	3	8	1	5	3	20	17%
Handicapped access (lack of)	2	1	0	1	2	6	5%
						118	100%

Additional Comments:

1. With all the land in & around Kerman, why does the school have to share its grounds with a city park? 2. I do not believe parks are safe. 3. How about safety patrols after dark? 4. I never know which gates are open or locked. 5. Restrooms are filthy & never working. 6. City has real problems taking care of its present facilities. 7. New lighting system blinds me in my yard through windows - old lights were set differently. 8. Need an education program for youth & community in regards to littering & vandalism. 9. Need more police at parks - too much smoking dope & drinking - not good for children. 10. Upgrade & expand pool. 11. We need more and safer parks. 12. Need new bathrooms. 13. I don't use the parks.

6. On average, how far do you normally travel to enjoy recreational activities?

Less than 1 mile	4	19	3	4	2	32	39%
1 - 2 miles	0	1	0	7	1	9	11%
3 - 5 miles	1	2	0	1	1	5	6%
6 - 10 miles	0	2	0	2	0	4	5%
11 - 20 miles	1	4	0	2	1	8	10%
More than 20 miles	4	13	0	3	5	25	30%
						83	100%

Additional Comments:

1. Outside Kerman. 2. Better parks outside of Kerman

7. What would you like to encourage the City to do in terms of open space opportunities?

Preservation of farmland	1	17	0	9	2	29	18%
Improved scenic qualities of parks	4	17	0	11	3	35	21%
More open space	2	5	0	4	2	13	8%
Recreational opportunities	2	13	0	6	3	24	15%
Installation of street trees	3	17	0	5	2	27	16%
Installation of landscaped medians	1	8	0	3	2	14	8%
Preservation of scenic entryways	3	10	2	6	2	23	14%
						165	100%

Additional Comments:

1. How about a park/playground on southwest corner lot of Hwy 145 & Kearney Blvd? 2. Walking paths. 3. Halt apartment building. 4. All subdivisions should provide a park or playground. 5. Keep facilities in good repair. 6. Don't allow trucks, RV's on residential streets. 7. Parking spaces. 8. Recreational opportunities for children. 9. Bigger lots for homes. 10. More small neighborhood parks.

8. Are you familiar with Kerman's recreational facilities and programs?

	SOUTHEAST	SOUTHWEST	NORTHEAST	NORTHWEST	LOCATION NOT SPECIFIED	TOTAL	PERCENT
Yes	4	24	0	9	5	42	51%
No	0	0	0	3	2	5	6%
No response	11	17	2	0	5	35	43%
						82	100%

Additional Comments:

1. Not knowledgeable with passive leisure activities for adults in community. 2. Not interested. 3. No advertising. Not all of them, I don't know where to get literature or information.

9. Would you agree to a tax increase in order to pay for additional park and recreational facilities and services?

Yes	4	13	1	6	2	26	29%
No	6	27	2	15	5	55	61%
No response	2	2	0	0	5	9	10%
						90	100%

Additional Comments:

1. Depends on type. 2. Maybe, need specifics. 3. Expenses should be paid for by people using facilities. 4. Only if there was a way that every family in Kerman would be paying, not just those who own homes. This is the same reason school bond issues don't pass! 5. Parks should be included in development & new housing subdivisions. Price of home in that area should reflect that benefit.

10. Would you agree to an increase in recreational program fees in order to pay for expanded or new recreation programs?

Yes	5	22	2	12	5	46	50%
No	7	18	1	7	3	36	40%
No opinion	2	3	0	0	4	9	10%
						91	100%

Additional comments:

1. Maybe (five responses). 2. Depends - for children only, not adults. 3. Too many can't afford to pay. 4. NO - NO - NO - NO - NO.

Chapter 4 Safety Element

CHAPTER 5

SAFETY ELEMENT

CHAPTER 5 • SAFETY ELEMENT

INTRODUCTION

The Safety Element is one of seven State-mandated elements of a city's General Plan. Section 65302(g) of the Government Code requires cities to develop, adopt, and implement a Safety Element as follows:

The General Plan shall include a safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence and other geologic hazards known to the legislative body; flooding; and wildland and urban fires.

Following accidents and disasters, citizens are sometimes heard to ask, "How did this happen?" or "How can this be prevented from happening again?" or perhaps most importantly, "What is the government's policy to prevent or respond to such emergencies?" The Safety Element in itself can not prevent natural disasters; however, it can provide standards that may help minimize the impacts of disasters on the human population and structural improvements in the area. It will also provide additional standards for planning structures that may be located in areas where there is a higher probability, or risk, of a disaster occurring.

Safety of the citizens of Kerman must be uppermost in the minds of the local decision-makers. This Element will provide a guideline towards developing a safer environment for the community. Local

decisions related to zoning, subdivisions, entitlement permits and the like should be tied to this Element's identification of such hazards.

THE ELEMENT

The Safety Element is the primary vehicle for relating local safety planning to City land use decisions. The Element's main purpose is to reduce death, injuries, property damage and the economic and social dislocation resulting from natural hazards. In 1975, the Legislature adopted SB 271, which made the safety element a mandatory part of the General Plan. At that time, the element was required to include policies relating to fire safety, flooding, and geologic hazards.

In 1984, the Legislature adopted AB 2038, which requires that the list of mandatory safety element issues be expanded to include seismic safety. Essentially, the Legislature took the issues previously considered in the seismic safety element and made them safety element requirements.

While the focus of the safety element is on fire, flooding, seismic and geologic hazards, it may also address locally relevant safety issues such as vehicle accidents, crime, power failures, and hazardous material spills.

SAFETY ELEMENT ORGANIZATION

The Kerman Safety Element contains three primary components:

- 1) existing conditions;
- 2) community goals; and
- 3) issues, policies, and action programs.

EXISTING CONDITIONS

Kerman is located on the floor of the central San Joaquin Valley approximately 15 miles west of Fresno. The mountains of the Coast Range and the Sierra Nevada are roughly equidistant from Kerman, about 35 miles to the southwest and northeast, respectively. The topography in and around Kerman is very level with a gentle, imperceptible slope to the southwest. Elevations in the planning area vary from about 210 feet to 225 feet. There are no natural waterways in the planning area. The largest nearby waterway of consequence is the San Joaquin River, about ten miles north. However, there are several irrigation canals that traverse the planning area.

Briefly discussed below are existing conditions pertaining to specific issues relating to safety in the City of Kerman. These issues include: seismicity, public safety, fire, flooding, and hazardous land use relationships. A more detailed description of these issues and additional background information on Kerman is found in Part 2 of this document.

Seismic Safety

Fresno County is comprised of nine seismic zones, as defined in the Five County Seismic Safety Element (FCSSE). These zones are differentiated by the level of ground motion that can reasonably be anticipated from earthquakes on the principal fault systems affecting the five county area. The generalized location of these zones is shown on Exhibit 11. This exhibit shows that Kerman is located within the V1 zone. The FCSSE states that the V1 zone:

includes most of the eastern San Joaquin Valley, and is characterized by a relatively thin section of sedimentary rock overlying a granitic basement. Amplification of shaking that would affect low to medium-rise buildings is relatively high, but the distance to either of the faults that are the expected sources of the shaking is sufficiently great that the effects should be minimal. The requirements of Zone II of the Uniform Building Code should be adequate for normal facilities.

This data indicates that Kerman is located in a lower risk area in terms of earthquake activity. Building standards contained in the Uniform Building Code for Zone II should be adequate for protection from earthquake events in Kerman.

Earthquakes

Although Fresno County does not have any major faults within its boundaries, Kerman has been affected by earthquakes in the past. The most notable earthquake in the area occurred in May, 1983. An earthquake with a measured magnitude of 6.7 on the Richter scale (Rs) occurred near the City of Coalinga about 45 miles southwest of Kerman. The earthquake produced a ground motion which caused widespread damage to the City of Coalinga. Although no damage was reported in Kerman, the quake was strongly felt by local residents. The Coalinga earthquake and aftershocks were not associated with the San Andreas Fault as most people believed, but rather, occurred in the deeply buried Sierran Block Boundary zone, which is thought to be made up of complex thrust fault systems.

Studies for the Chem Waste Kettleman Hills hazardous waste facility determined that the thrust fault poses the greatest seismic threat to the region. Maximum credible earthquakes (MCE's) from this fault have been predicted to range from 6.5 to 7.0 on the Richter scale. The San Andreas Fault, located further to the west also poses a seismic risk.

As stated above, the City of Kerman is located in the V1 seismic zone, which is characterized by a relatively thin section of sedimentary rock overlying a granitic basement. Ground motion that could result from an earthquake would be high, but the distance to the faults that are the expected sources of the shaking is sufficiently great that the effects should be minimal.

Police Protection

Crime prevention has become the number one issue on the minds of the public. The increases in robbery, gang activity, graffiti, auto-theft, etc. have led the public's request for more police officers on

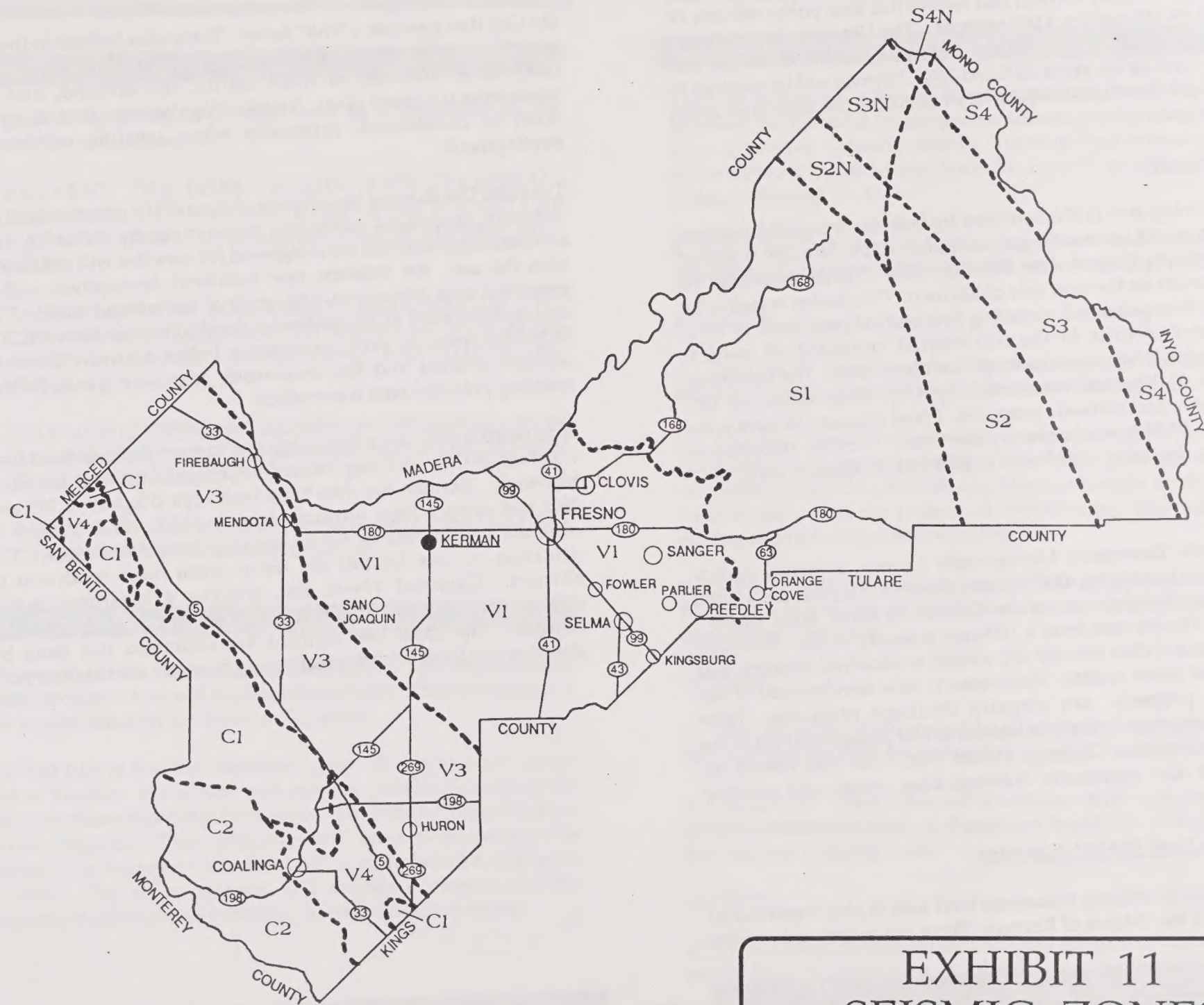


EXHIBIT 11
SEISMIC ZONES

the street. In 1993, Kerman had twelve full time police officers, or about 1.89 officers per 1,000 persons. The City maintains a target ratio of 2 officers per 1,000 residents. In order to maintain this service level for the years 2003 and 2013, Kerman will be required to hire 7 and 16 officers, respectively (estimates use high population projections).

Fire Hazards

The planning area is characterized by both the urbanized portions of Kerman and surrounding agricultural fields. The City is served by the North Central Fire District. The District maintains its headquarters on the west side of Kerman. This station is staffed by nine full-time personnel, including two medical personnel. In 1992, 82 percent of calls to the fire district consisted of medical emergencies while seven percent involved fires. The urbanized portions of Kerman are served by City water lines for fire suppression and domestic purposes. Water pressure in most areas is about 40-55 pounds per square inch. Further information regarding fire safety is included in Part 2 of the General Plan.

Flooding

The Federal Emergency Management Agency, a federal agency charged with mapping flood prone areas throughout the United States, identifies no area within Kerman as being flood prone - subject to floodwaters from a 100-year intensity storm. However, certain areas within the city are subject to localized flooding and ponding of storm waters. Furthermore, new development, if not designed properly, can magnify drainage problems. New development must conform to standards and plans contained in the Kerman Stormwater Drainage Master Plan. The Plan directs the location of new stormwater drainage lines, mains, and ponding facilities.

Hazardous Land Use Relationships

Identification of existing hazardous land uses is also important to the safety of the citizens of Kerman. There are several uses within

the City that generate a "risk" factor. These uses include industrial operations on the south side of the city, the state highways which carry large volumes of truck traffic, the railroad, and the wastewater treatment plant. Relationships between land use types must be considered, especially when locating residential development.

The Land Use Element has eliminated most of the potential land use conflicts associated with the above uses by insuring that surrounding properties are designated for uses that will not conflict with the use. For instance, new industrial development will be permitted only adjacent to, and south of the railroad tracks. This area is downwind of all residential development in Kerman. The industrial area, in turn, provides a buffer between Kerman's residential areas and the wastewater treatment plant, further reducing potential land use conflicts.

A hazardous land use relationship that is more difficult to address involves trucks carrying hazardous materials along the State highways. Kerman has two State highways (Highways 145 and 180) that carry a large amount of truck traffic. It is difficult to ascertain the number of trucks carrying hazardous waste. The American Avenue landfill lies about seven miles southwest of Kerman. Chemical Waste, Inc. operates a hazardous waste collection facility at Kettleman City, about 55 miles south of Kerman. The Land Use Element has addressed this issue by directing residential development away from the state highways.

COMMUNITY GOALS

The following goals have been used as a guideline in the preparation of this Element:

1. PREVENT THE LOSS OF LIFE AND PERSONAL PROPERTY DUE TO NATURAL AND MAN-MADE HAZARDS, INCLUDING EARTHQUAKES, FLOODS AND FIRES.
2. SAFEGUARD THE ECONOMIC RESOURCES OF THE CITY FROM LOSSES DUE TO NATURAL AND MAN-MADE HAZARDS, INCLUDING EARTHQUAKES, FLOODS AND FIRES.
3. PROMOTE CITIZEN AWARENESS OF THE IMPLICATION OF NATURAL AND MAN-MADE HAZARDS WHICH EXIST IN THE REGION.
4. SAFEGUARD PUBLIC SAFETY AND THE PROTECTION OF PROPERTY BY REDUCING CRIME.

ISSUES, POLICIES, AND ACTION PROGRAMS

This portion of the Element establishes policies and implementing action programs that will implement the Safety Element's goals - a safe environment for the citizens of Kerman.

The first part of the Plan identifies issues relating to safety in the City of Kerman. The second part contains policies that will guide future decisions regarding these issues. The third part consists of an Action Program. These programs will serve to implement the policies. For example, hazards related to substandard buildings is an issue. The action program will provide a program for the targeting of substandard buildings for renovation or removal.

A. SEISMIC AND GEOLOGIC SAFETY

The City of Kerman is located in an area that is seismically active, however, the potential for dangerous seismic activity is slight. The Five Counties Seismic Safety Element recommends new construction conform to standards for Zone 2, as defined by the Uniform Building Code.

1. **POLICY:** The City shall insure that all new and rehabilitated structures are constructed to meet adequate building standards.

ACTIONS:

- a. The City of Kerman shall adopt building code standards for Seismic Zone 2 as described in the Uniform Building Code.

- b. The City shall continue the abatement/rehabilitation of unreinforced masonry buildings. The City shall use funding programs contained in the Housing Element to assist qualified low income families in the process of rehabilitating their homes or renting or purchasing a new dwelling.

2. **POLICY:** The City shall review the State Mining and Geology Board's publications which define Special Studies Zones for areas along fault lines.

ACTION:

- a. The Planning Department shall review State Mining and Geology maps as they are updated.

3. **POLICY:** The City of Kerman shall continue the abatement/rehabilitation of dangerous buildings as defined by the Uniform Housing Code.

ACTION:

- a. The building department shall identify dangerous buildings and target them for abatement or rehabilitation, through the process

outlined in the Uniform Housing Code.

B. POLICE PROTECTION

Crime prevention and public safety is the most important function of a city to many citizens. Kerman has aimed to maintain a ratio of two police officers per 1,000 residents. The City has fallen slightly behind this goal recently. Concern has been voiced that new development has not been required to pay its fair share in terms of police services.

1. POLICY: The City shall actively involve citizens in crime prevention and public safety awareness.

ACTION:

a. The City shall continue operation of the Neighborhood Watch and D.A.R.E (Drugs Abuse Resistance Education) programs.

2. POLICY: Kerman should maintain a ratio of two officers per 1,000 citizens.

ACTION:

a. The City shall undertake a feasibility study for the establishment of Mello-Roos Districts for new subdivisions to fund additional police personnel and equipment.

C. FIRE SAFETY

Kerman has established a good record in terms of fire safety. The entire planning area is generally located within three minutes of the Kerman station of the North Central Fire District. The City Council recently enacted legislation requiring new or remodeled structures over 5,000 square feet to install fire sprinklers.

1. POLICY: The City and the North Central Fire District shall

endeavor to provide adequate fire services to all residents in the City of Kerman.

ACTION:

a. The City of Kerman shall coordinate with the North Central Fire District through Kerman's site plan review process and the State's environmental review process to insure that future development does not impose a burden on their services.

2. POLICY: The City of Kerman shall coordinate with North Central Fire District to provide prevention and public education to the residents to reduce the demand for fire protection services.

ACTION:

a. The City shall contact the Fire District to initiate a fire prevention education program with the Kerman-Floyd School District.

3. POLICY: The City shall require that yards and lots be maintained free of weeds and debris.

ACTION:

a. The North Central Fire District shall send annual abatement letters to property owners who have properties where weed and debris build-up pose a public safety problem.

4. POLICY: The City shall work to improve the response capabilities of emergency crews.

ACTION:

a. During the review of subdivisions, the City shall ensure the new street names are continuations of existing streets for streets that are aligned, and that addresses are logically assigned. The Public Works Department shall periodically check street signs to ensure they are clearly visible and legible.

b. During subdivision review the City shall ensure that all subdivisions, except for cul-de-sac streets have a minimum of two egress/ingress points.

D. HAZARDOUS LAND USE RELATIONSHIPS

Relationships between land use types should also be considered especially when locating residential development and other sensitive land uses, such as schools, hospitals, and convalescent homes. There are many hazardous uses that would not be appropriate adjacent to sensitive land uses. For example, the Land Use Element will ensure that new residential development is not permitted south of California Avenue. This will prevent conflicts with the industrial uses and commercial service uses and the Southern Pacific Railroad. Residential development will also be discouraged along the state highways in order to reduce exposure to hazardous materials, carried by trucks and excessive noise levels.

1. POLICY: Residential development in close proximity to industrial zones and the wastewater treatment plant shall be avoided. Development adjacent to the wastewater treatment plant shall be limited to industrial uses.

ACTION:

a. Adoption of the Land Use Element prevents residential development from encroaching too close to industrial zones and limits development adjacent to the wastewater treatment plant to industrial uses.

2. POLICY: Residential land uses shall be limited adjacent to State Highway 145 and State Highway 180.

ACTION:

a. Adoption of the Land Use Element and Land Use Map prevents residential development from fronting onto State Highways 145 and 180.

3. POLICY: Businesses that use, produce, or generate any type of hazardous materials shall be conducted in a safe manner.

ACTION:

The City shall require that proposals for developments using, producing, or generating hazardous materials, such as cold-storage facilities include an emergency preparedness plan. All new industrial uses shall be required to prepare and file a Business Plan as required by the Fresno County Health Department.

CONCLUSION

There are a variety of hazards that can adversely affect life and property in Kerman, however, compared to many other communities in California, Kerman is a relatively "safe" place to live. Occurrences of natural disasters such as earthquakes, fires and floods cannot be controlled by the City, however, Kerman can minimize the impacts of these events by preparing for them in advance. Implementation of adequate building standards, appropriate land use designations, adequate fire protection services and preparation of emergency plans are just a few ways in which the City can provide a safer environment for its citizens. Implementation of the Safety Element's policies and action programs will contribute to and maintain the quality of life that exists in the City of Kerman.

NOISE ELEMENT

CHAPTER 6 • NOISE ELEMENT

INTRODUCTION

The Noise Element of the General Plan is a planning document which provides a policy framework for addressing potential noise impacts encountered in the planning process.

The content of a Noise Element and the methods used in its preparation have been determined by the requirements of Section 65302 (f) of the California Government Code and by Guidelines for the Preparation and Content of Noise Elements of the General Plan adopted and published by the California Office of Noise Control (ONC) in 1976. The ONC Guidelines require that major noise sources and areas containing noise-sensitive land uses be identified and quantified by preparing generalized noise exposure contours for current and projected conditions.

According to the Government Code requirements, noise exposure information should be included in a Noise Element for the following major noise sources:

1. Highways and freeways
2. Primary arterials and major local streets
3. Railroad operations
4. Aircraft and airport operations
5. Local industrial facilities
6. Other stationary sources

Noise-sensitive uses identified by the Government Code and by the

City of Kerman include the following:

1. Residential development
2. Schools
3. Hospitals, nursing homes
4. Churches
5. Libraries

The Noise Element is directed at minimizing future noise conflicts. A noise ordinance, on the other hand, is directed at resolving existing noise conflicts. A noise ordinance may be used to address noise levels generated by existing industrial, commercial, agricultural and residential uses, which are not regulated by federal or state noise level standards. The regulation of noise sources such as traffic on public roadways, railroad line operations and aircraft in flight is preempted by existing federal and/or state regulations, meaning that such sources generally may not be addressed by a noise ordinance. The Noise Element addresses the prevention of noise conflicts from all of these sources.

Relationship to Other Elements of the General Plan

The Noise Element is related to the Land Use, Housing, Circulation and Open Space Elements of the General Plan. Recognition of the interrelationship of noise and these four mandated elements is necessary to prepare an integrated general plan and to initiate changes which will reduce noise exposure to acceptable levels in areas where noise may presently exceed the levels set forth by the adopted policies of the Noise Element. The relationship between these elements is briefly discussed below:

1. Land Use: An objective of the Noise Element is to provide noise exposure information for use in the Land Use Element. When integrated with the Noise Element, the Land Use Element will show acceptable land uses in relation to existing and projected noise levels.
2. Housing: The Housing Element considers the provision of adequate sites for new housing and standards for housing

stock. Since residential land uses are noise-sensitive, the noise exposure information of the Noise Element must be considered when planning the locations of new housing. The State Noise Insulation Standards may influence the locations and construction costs of multi-family dwellings, which should be considered by the Housing Element.

3. Circulation: The circulation system, which is a major source of noise, must be correlated with the Land Use Element. This is especially true for roadways which carry significant numbers of trucks. Noise exposure will thus be a decisive factor in the location and design of new transportation facilities, and in the mitigation of noise produced by existing facilities upon existing and planned land uses.
4. Open Space: Excessive noise adversely affects the enjoyment of recreational pursuits in designated open space, particularly in areas where quiet is a valued part of the recreational experience. Thus, noise exposure should be considered in planning for this kind of open space use. Conversely, open space can be used to buffer noise-sensitive uses from noise sources by providing setbacks and visual screening.

Noise And Its Effects On People

Appendix A provides a discussion of the fundamentals of noise assessment, the effects of noise on people and criteria for acceptable noise exposure, and is a reference for use by the City during the review of documents or proposals which refer to the measurement and effects of noise.

Definitions

1. A-Weighted Sound Level: All sound levels referred to in this policy document are in A-weighted decibels. A-weighting de-emphasizes the very low and very high frequencies of sound in a manner similar to the human ear. Most community noise standards utilize A-weighting, as it provides a high degree of correlation with human annoyance and health effects.

2. Community Noise Equivalent Level (CNEL): The average equivalent sound level during a 24-hour day, obtained after addition of approximately five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and ten decibels to sound levels in the night before 7:00 a.m. and after 10:00 p.m.
3. Day/Night Average Sound Level (Ldn): The average equivalent sound level during a 24-hour day, obtained after addition of ten decibels to sound levels in the night after 10:00 p.m. and before 7:00 a.m.
4. Equivalent Sound Level (Leq): The sound level containing the same total energy as a time varying signal over a given sample period. Leq is typically computed over 1, 8 and 24-hour sample periods.
5. New Development: Projects requiring land use or building permits, but excluding remodeling or additions to existing structures.
6. Noise-Sensitive Land Use: Residential land uses, transient lodging, schools, libraries, churches, hospitals and nursing homes.
7. Outdoor Activity Areas: Patios, decks, balconies, outdoor eating areas, swimming pool areas, yards of dwellings and other areas which have been designated for outdoor activities and recreation.
8. Stationary Noise Source: Any fixed or mobile source not preempted from local control by existing federal or state regulations. Examples of such sources include agricultural, industrial and commercial facilities and vehicle movements on private property.
9. Transportation Noise Source: Traffic on public roadways, railroad line operations and aircraft in flight. Control of noise from these sources is preempted by existing federal or state regulations. However, the effects of noise from transportation

sources may be controlled by regulating the location and design of adjacent land uses.

EXISTING AND FUTURE NOISE ENVIRONMENT

Overview of Sources

Based on discussions with City staff, the requirements of the Government Code and field studies conducted during the preparation of this Noise Element, it was determined that traffic on local roadways is a potentially significant source of community noise within the City of Kerman. Roadways of concern include State Routes (SR) 145 (Madera Avenue) and 180 (Whitesbridge Road). The Westside Branch of the Southern Pacific Railroad also passes through the City, and there are two stationary sources which have been identified by the City as potentially-significant sources of noise within the community. Major noise sources identified for study are indicated on Exhibit 12.

Methods Used to Develop Noise Exposure Information

According to the Government Code and ONC Guidelines, noise exposure contours should be developed in terms of the Day-Night Average Level (Ldn) or Community Noise Equivalent Level (CNEL) for transportation-related noise sources. Both of these descriptors represent the weighted energy noise level for a 24-hour day after inclusion of a 10 dB penalty for noise levels occurring at night between the hours of 10:00 p.m. and 7:00 a.m. The CNEL descriptor also includes a penalty of about 4.8 dB for noise levels occurring during the evening hours of 7:00 p.m. and 10:00 p.m. The CNEL descriptor was developed for the quantification of aircraft noise, and its use is required when preparing noise exposure maps for airports within the State of California. The CNEL and Ldn descriptors are generally considered to be equivalent to each other for most community noise environments within 1.0 dB. The Ldn descriptor has been used in this Noise Element to quantify noise from the above-described major noise sources.

Analytical noise modeling techniques were used to develop generalized Ldn contours for existing and future conditions. Analytical noise modeling techniques generally make use of source-specific data, including descriptions of noise-generating equipment or activities, hours of operation, seasonal fluctuations, and average levels of noise from source operations. Analytical methods have been developed for many environmental noise sources, including roadways, railroad line operations, railroad yard operations, industrial plants and aircraft/airport operations. Such methods will produce reliable results as long as data inputs and assumptions are valid for the sources being studied.

The noise exposure information developed during the preparation of the Noise Element does not include all conceivable sources of industrial, commercial or agricultural noise within the City, but rather focuses on the existing sources of noise which have been identified by the City as being significant. As the policies of this Noise Element are applied in the future, it is likely that other potentially-significant sources will be identified.

Roadways

The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to develop Ldn contours for SR 145 and SR 180. The FHWA Model is the analytical method currently favored by most state and local agencies, including Caltrans, for highway traffic noise prediction. The model is based upon reference energy emission levels for automobiles, medium trucks (2 axles) and heavy trucks (3 or more axles), with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly Leq values for free-flowing traffic conditions, and is generally considered to be accurate within + 1.5 dB. The model assumes a clear view of traffic with no shielding at the receiver location. To predict Ldn values, it is necessary to determine the hourly distribution of traffic for a typical day and adjust the traffic volume input data to yield an equivalent hourly traffic volume. The Calveno traffic noise emission curves were used as recommended

by Caltrans to more accurately calculate noise levels generated by California traffic.

For all roadways being studied, existing (1992) and future (2012) annual average daily traffic (AADT) volumes and percentages of trucks were obtained from Caltrans. The day/night distribution of traffic was determined from hourly traffic counts performed by Caltrans near the intersection of SR 180 and SR 145 during the weeks of April 10, 1992 on SR 145 and June 19, 1993 on SR 180. Vehicle speeds assumed during the traffic noise modelling process were the posted vehicle speeds.

Distances from the center of the roadways to the 60 and 65 dB Ldn contours along with input data used during the traffic noise modelling process are summarized by Table 19.

TABLE 19
DISTANCE TO Ldn CONTOURS AND TRAFFIC DATA

Roadway	AADT		D%/N%1(2)	%MT(3)	%HT(4)	Speed (MPH)	Distance to Ldn Contours (Ft.) (1)			
	1992	2013					1992		2013	
							65 dB	60 dB	65 dB	60 dB
SR 180 (Whitesbridge Rd):										
West of First Ave.	6,200	12,500	88/12	3.9	4.9	55	85	182	135	291
First Ave. to Vineland Ave.	6,600	14,250	88/12	3.9	4.9	40	59	127	99	212
East of Vineland Ave.	6,600	14,250	88/12	3.9	4.9	55	88	190	147	317
SR 145 (Madera Ave):										
North of City Limits	9,000	10,700	90/10	7.4	12	55	137	296	154	332
N. City Limits to Kearney Blvd.	17,500	20,800	90/10	7.4	12	35	139	299	156	335
Kearney Blvd. to S.P.R.R.	17,500	20,800	90/10	7.4	12	30	146	314	163	352
South of S.P.R.R.	7,700	11,750	90/10	7.4	12	55	124	267	164	354

(1) Distances are from center of roadways

(2) Day/Night traffic split (day is defined as 7am - 10pm and night as 10 pm - 7 am)

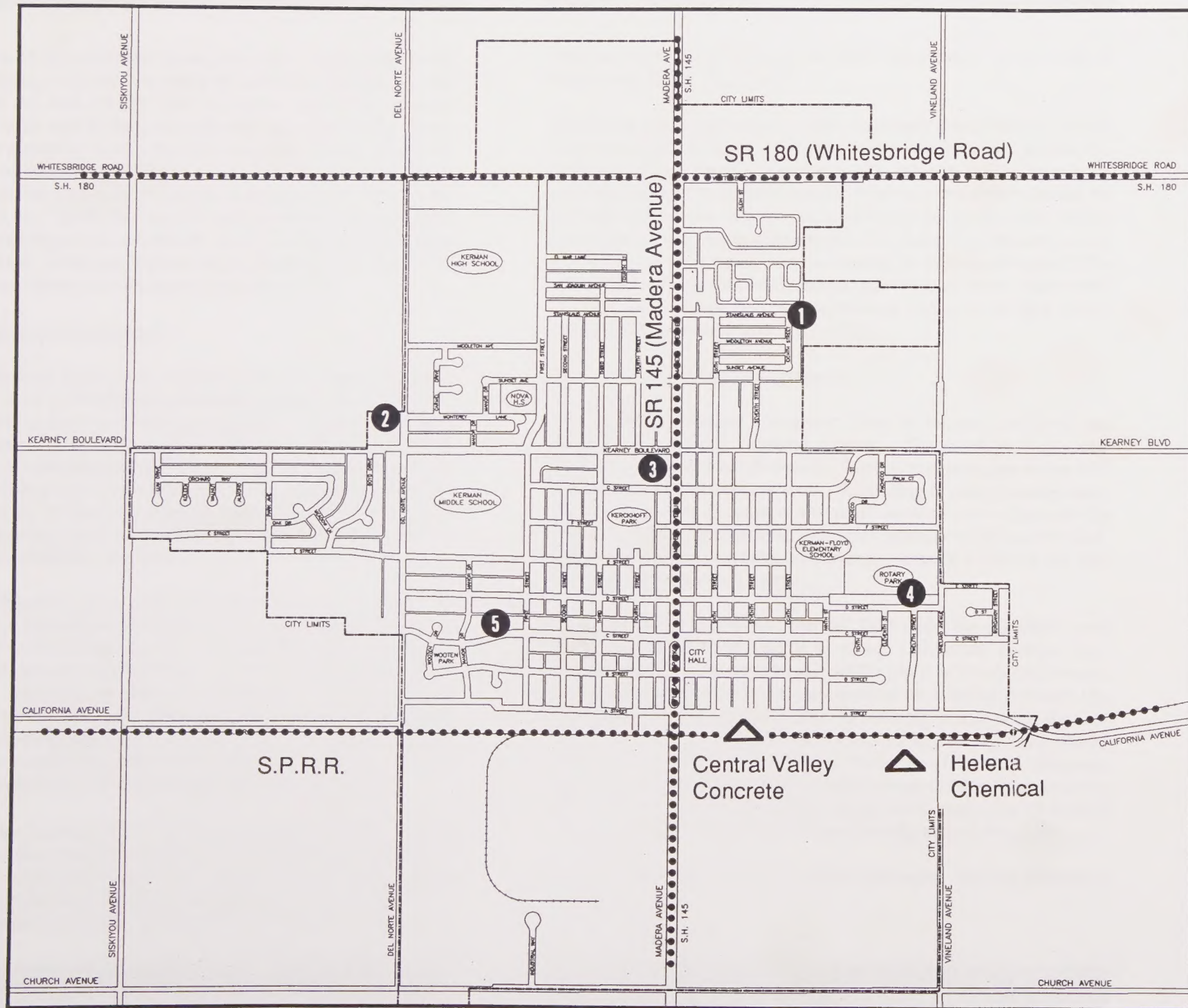
(3) Medium trucks

(4) Heavy trucks

Southern Pacific Railroad

The Westside Branch of the Southern Pacific Railroad passes along the southern edge of the central core of Kerman. According to the S.P.R.R. Trainmaster's office in Fresno, one train per day typically passes through the City. Future estimates of railroad traffic through Kerman were not available from the railroad. Noise levels from railroad operations in Kerman were quantified using the analytical method developed in 1973 by Wyle Laboratories (Wyle Laboratories Report WCR-73-5). This is the method suggested by the California Office of Noise Control for Noise Element studies. Additionally, noise level measurements were conducted at approximately 100 feet from the center of the tracks near the Madera Avenue grade crossing on June 9, 1993.

The Wyle methodology calculates noise exposure based on reference noise level data for various types of trains under different operating conditions, distance from the tracks, speed and the

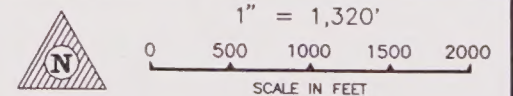


COMMUNITY NOISE SURVEY SITES AND MAJOR NOISE SOURCES

- 1** Community Noise Survey Site
- Stationary Noise Source
- Transportation Noise Source

CITY OF Kerman
GENERAL PLAN UPDATE

EXHIBIT NO. 12



COLLINS & ASSOCIATES
PLANNING CONSULTANTS

characteristics of the track the trains pass over. According to the Wyle methodology and the frequency of operation provided by the railroad, the 65 and 60 dB Ldn contours would be located approximately 29 and 63 feet, respectively, from the tracks. These distances are generally within the railroad right-of-way. Based on the single train passby monitored on June 9, 1993, maximum noise levels at about 100 feet from the tracks were about 88 dB from the warning horn and 75-80 dB from the passing locomotive and cars. Although noise exposure as defined by the Ldn is not significant from the railroad, some intermittent interruption of activities due to train noise may affect persons located near the tracks.

Major Stationary Noise Sources

The production of noise is an inherent part of many industrial, commercial and agricultural processes, even when the best available noise control technology is applied. Noise production within an industrial or commercial facility or in close proximity to many types of agricultural equipment is controlled indirectly by federal and state employee health and safety regulations (OSHA and Cal-OSHA). However, exterior noise emissions from such operations have the potential to exceed locally acceptable standards at nearby noise-sensitive land uses.

Noise control issues focus upon two objectives: to prevent the introduction of new noise-producing uses in a noise-sensitive area, and to prevent encroachment of noise-sensitive land uses upon existing noise-generating facilities. The first objective can be achieved by applying performance standards to proposed new industrial or other noise generating uses. The second objective can be met by requiring that new noise-sensitive uses in proximity to existing noise sources include receiver-based mitigation measures to ensure compliance with the same performance standards.

Noise exposure information for the major stationary noise sources selected for study was developed from operational data obtained from source operators and from noise level measurements conducted at reference locations around the noise sources. In discussing future operations with source operators it was apparent

that too many variables exist to allow meaningful projections of future activity or noise levels.

Following are discussions of major stationary noise sources which were identified for study. The discussions are intended to provide generalized information concerning the relative noise impacts of each source, and to identify specific noise sources which should be considered in the review of development proposals where potential noise conflicts could result. The following discussions do not represent a comprehensive accounting of all noise sources in the city. It is probable that unidentified industries or other major noise sources exist which generate significant noise levels and could result in noise-related land use conflicts.

A. Helena Chemical Company

The Helena Chemical Company plant is located south of the S.P.R.R. and west of Vineland Avenue. The plant packages and distributes agricultural chemicals. Typical operating hours are 4:00 a.m. to 6:00 p.m., 5 days per week. According to plant management, the major source of noise at the plant which could affect off-site locations is the scrubber used when bulk powder is being unloaded. Powder unloading occurs intermittently, usually 1-2 times per day for about 30 minutes at a time.

Noise levels measured on June 19, 1993 from the scrubber were 50-52 dB north of the S.P.R.R. along California Avenue and approximately 50 dB directly east of the plant at Vineland Avenue. Since there was a row of rail cars parked on a siding between the plant and the California Avenue monitoring site, it is likely that noise levels could be higher than measured in this area. The closest existing noise-sensitive land uses to the Helena Chemical Company plant are single-family homes located along California Avenue to the north of the plant and a single family home and a church located on the east side of Vineland Avenue directly east of the plant.

Source: Mr. John Brandon, Plant Manager, Helena Chemical Company

B. Central Valley Concrete

Central Valley Concrete operates a concrete batch plant between the S.P.R.R. and California Avenue between the Seventh and Eighth Street alignments. Typical hours of operation are 6:30 a.m.-11:00 a.m., 5 days per week. Afternoon operations occasionally occur. The major sources of noise associated with this plant are concrete mixer trucks, a front loader, a pneumatic vibrator to loosen material within supply hoppers, and sand, gravel and bulk cement trucks. The typical number of concrete mixer trucks loaded by the plant each day is eight. On a busy day, the plant can load as many as 35 trucks.

Noise level measurements were conducted on June 10, 1993 on the north side of California Avenue directly across from the plant and at several other locations along the north side of California Avenue to the east and west. The measurement sites were representative of the closest existing homes to the plant. Directly across California Avenue at about 125 feet from the plant, noise levels ranged from 65-71 dB while a concrete mixer truck was being loaded. This included noise from the vibrator and some shielding from the plant office building. At 125 feet east of this location (about 175 NE of plant), the measured noise level was 72-75 dB with the same equipment in operation but no shielding from the building. To the west, on the north side of California Avenue and at about 175 feet northwest of the plant, measured noise levels were 68-70 dB without the vibrator in operation and 70-72 dB with the vibrator.

The above-described levels are well in excess of the noise level standards applied by this Noise Element to the development of new stationary noise sources or new noise-sensitive uses in proximity to existing stationary noise sources.

Source: Mr. Scott Neal, Central Valley Concrete

Community Noise Survey

A community noise survey was conducted within the City during June 1993 to document background noise levels in areas where

noise-sensitive land uses are located. Short-term monitoring was conducted at 4 sites once during rush hour conditions (7:00 a.m. - 9:00 a.m. or 4:00 p.m. - 6:00 p.m.) and once during mid-day conditions (9:00 a.m. - 4:00 p.m.) Continuous noise monitoring was conducted at a fifth site to record the variation of noise levels through a full 24-hour period. The data collected during the survey included the Leq and observed maximum noise levels. Noise monitoring sites, measured noise levels and estimated Ldn values at each site are described by Table 20. Hourly variations in noise levels at the long-term monitoring site are shown in Table 21. Monitoring site locations are shown on Exhibit 12.

Review of data summarized in Table 20 and depicted by Table 21 indicated that existing background noise levels within the City of Kerman are relatively quiet. An exception to this occurred during the 24-hour measurement period at Site 5 between the hours of 5:00 p.m. and 7:00 p.m. However, it is believed that these levels were caused by yard or car maintenance work in close proximity to the microphone, and that such levels are not typical of noise-sensitive areas within the community. To preserve quiet conditions, noise

TABLE 20
SUMMARY OF COMMUNITY NOISE SURVEY DATA

Site #	Location	Ld	Ln	Level, dBA	Ldn
				Lmax (Source)	
1	East end Stanislaus Ave.	48	35-45	56 (Traffic)	47-51*
2	LDS Church Parking Lot	47	35-45	58 (Traffic)	46-50*
3	Between Kearney Ave. & G St.	52	35-45	62 (Trucks)	51-55*
4	Rotary Park	47	35-45	57 (Construction)	47-51*
5**	15418 W. "C" St.	57	43	84 (Unknown)	56

Ld = Average Leq for two 15 minute samples obtained between 7:00 a.m. and 10:00 p.m. except for Site 5 where 24-hour monitoring was conducted.

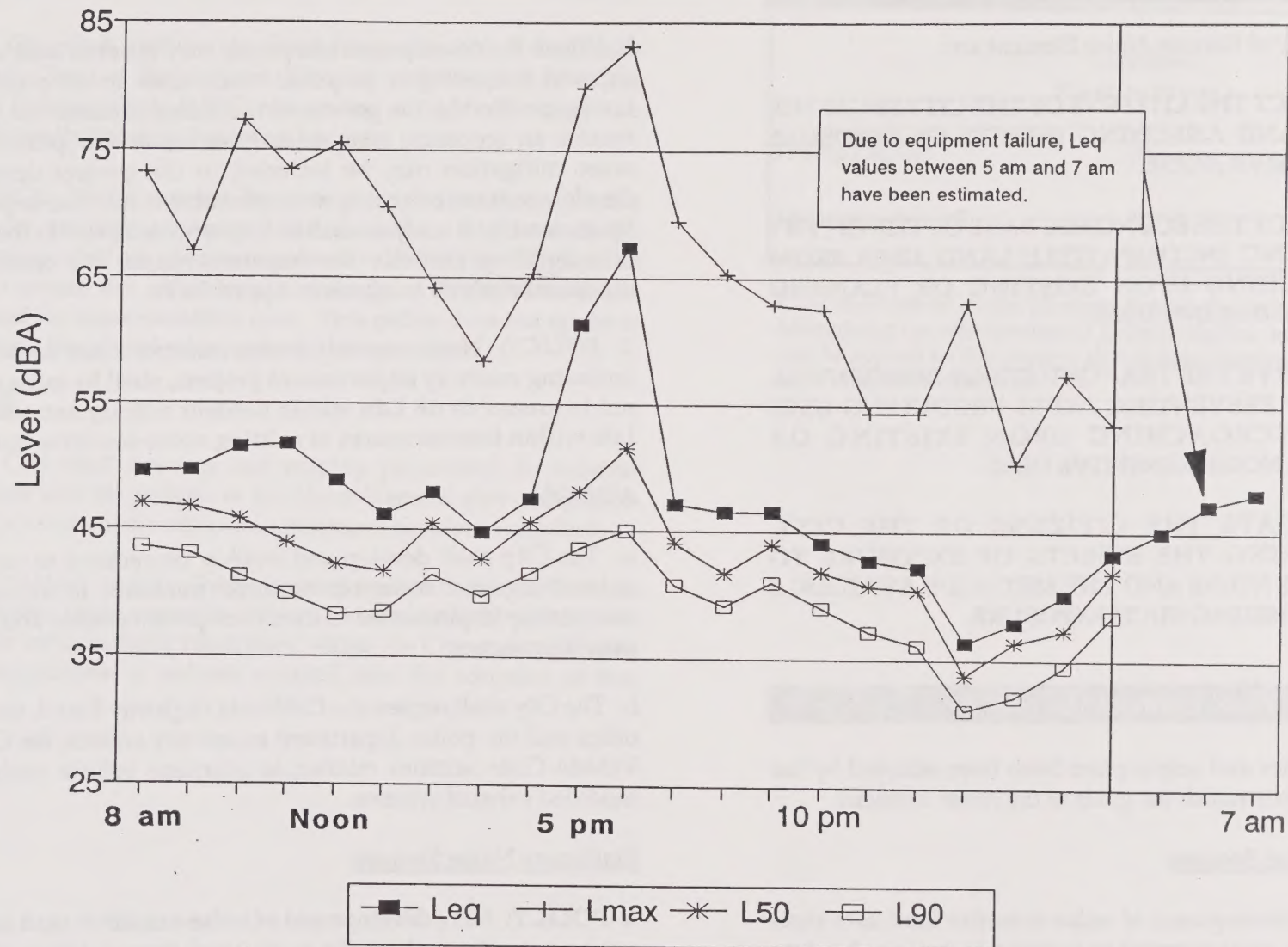
Ln = Estimated Leq for the nighttime hours of 10:00 p.m. and 7:00 a.m. based upon 24 hour monitoring conducted at Site 5.

* Ldn estimated from Ld and Ln

** 24 hour monitoring site and actual measured noise level data. Refer to Figure 2 for a description of hourly noise levels.

Source: Brown-Buntin Associates

TABLE 21
HOURLY NOISE LEVELS
15418 W. "C" Street



level standards and policies have been adopted to prevent degradation of the existing noise environment as much as possible.

NOISE ELEMENT GOALS

The goals of the City of Kerman Noise Element are:

1. TO PROTECT THE CITIZENS OF THE CITY FROM THE HARFUL AND ANNOYING EFFECTS OF EXPOSURE TO EXCESSIVE NOISE.
2. TO PROTECT THE ECONOMIC BASE OF THE CITY BY PREVENTING INCOMPATIBLE LAND USES FROM ENCROACHING UPON EXISTING OR PLANNED NOISE-PRODUCING USES.
3. TO PRESERVE THE TRANQUILITY OF RESIDENTIAL AREAS BY PREVENTING NOISE-PRODUCING USES FROM ENCROACHING UPON EXISTING OR PLANNED NOISE-SENSITIVE USES.
4. TO EDUCATE THE CITIZENS OF THE CITY CONCERNING THE EFFECTS OF EXPOSURE TO EXCESSIVE NOISE AND THE METHODS AVAILABLE FOR MINIMIZING SUCH EXPOSURE.

POLICIES AND ACTION PROGRAMS

The following policies and action plans have been adopted by the City of Kerman to accomplish the goals of the Noise Element:

Transportation Noise Sources:

1. **POLICY:** New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected future levels of noise from transportation noise sources which exceed 60 dB Ldn in outdoor activity areas or 45 dB Ldn in interior spaces.

ACTION:

- a. The City shall review new public and private development proposals to determine conformance with the policies of this Noise Element.

- b. Where the development of a project may result in land uses being exposed to existing or projected future noise levels exceeding the levels specified by the policies of the Noise Element, the City shall require an acoustical analysis early in the review process so that noise mitigation may be included in the project design. For development not subject to environmental review, the requirements for an acoustical analysis shall be implemented prior to the issuance of a building permit. The requirements for the content of an acoustical analysis are given in Appendix B.

2. **POLICY:** Noise created by new transportation noise sources, including roadway improvement projects, shall be mitigated so as not to exceed 60 dB Ldn within outdoor activity areas and 45 dB Ldn within interior spaces of existing noise-sensitive land uses.

ACTION:

- a. The City shall develop and employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the development review and building permit processes.

- b. The City shall request the California Highway Patrol, the sheriff's office and the police department to actively enforce the California Vehicle Code sections relating to adequate vehicle mufflers and modified exhaust systems.

Stationary Noise Sources:

1. **POLICY:** New development of noise-sensitive land uses shall not be permitted where the noise level from existing stationary noise sources exceeds the noise level standards of Table III.

ACTION:

- a. The City shall not permit projects that exceed allowable decibel levels established by this Element.
- b. The City shall enforce the State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code (UBC) concerning interior noise exposure for multi-family housing, hotels and motels.

2. POLICY: Noise created by new proposed stationary noise sources or existing stationary noise sources which undergo modifications that may increase noise levels shall be mitigated so as not to exceed the noise level standards of Table 22 on lands designated for noise-sensitive uses. This policy does not apply to noise levels associated with agricultural operations.

ACTION:

- a. The City shall develop and employ procedures to monitor compliance with the policies of the Noise Element after completion of projects where noise mitigation measures have been required.
- b. The City shall periodically review and update the Noise Element to ensure that noise exposure information and specific policies are consistent with changing conditions within the City and with noise control regulations or policies enacted after the adoption of this element.

TABLE 22
MAXIMUM ALLOWABLE NOISE EXPOSURE - STATIONARY
SOURCES ¹

	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly Leq, dB	50	45
Maximum level, dB	70	65

¹ As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.

APPENDIX A

NOISE AND ITS EFFECTS ON PEOPLE

Fundamentals of Noise Assessment:

Noise is often defined simply as unwanted sound, and thus is a subjective reaction to characteristics of a physical phenomenon. The descriptors of community noise in current use are the results of many years of effort to translate objective measurements of sound into measures of subjective reaction to noise. Before elaborating on these descriptors, it is useful to discuss some fundamental concepts of sound.

Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and hence are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, now called Hertz (Hz) by international agreement.

The speed of sound in air is approximately 770 miles per hour, or 1,130 feet/second. Knowing the speed and frequency of a sound, one may calculate its wavelength, the physical distance in air from one compression of the atmosphere to the next. An understanding of wavelength is useful in evaluating the effectiveness of physical noise control devices such as mufflers or barriers, which depend upon either absorbing or blocking sound waves to reduce sound levels.

To measure sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel (dB) scale was devised.

The decibel scale uses the hearing threshold as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. Use of the decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. In the range of usual environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighting the frequency response of a sound level measurement device (called a sound level meter) by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. Figure A-1 illustrates typical A-weighted sound levels due to recognizable sources.

It is common to describe community noise in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which is the sound level corresponding to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptors such as Ldn and CNEL, and shows very good correlation with community response to noise.

Two composite noise descriptors are in common use today: Ldn and CNEL. The Ldn (day-night average level) is based upon the average hourly Leq over a 24-hour day, with a +10 decibel weighting applied to nighttime (10:00 p.m. to 7:00 a.m.) Leq values. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were subjectively twice as loud as daytime exposures. The CNEL (Community Noise Equivalent Level), like Ldn, is also based upon the weighted

average hourly Leq over a 24-hour day, except that an additional 4.77 decibel penalty is applied to evening (7:00 p.m. to 10:00 p.m.) hourly Leq values.

The CNEL was developed for the California Airport Noise Regulations, and is applied specifically to airport/aircraft noise assessment. The Ldn scale is a simplification of the CNEL concept, but the two will usually agree, for a given situation, within 1 dB. Like the Leq, these descriptors are also averages and tend to disguise variations in the noise environment. Because Ldn and CNEL presume increased evening or nighttime sensitivity, they are best applied as criteria for land uses where nighttime noise exposures are critical to the acceptability of the noise environment, such as residential developments.

TABLE 23
EXAMPLES OF NOISE LEVELS

NOISE SOURCE	SOUND LEVEL	SUBJECTIVE DESCRIPTION
AMPLIFIED ROCK'N ROLL BAND ▶	120 dB	DEAFENING
JET TAKEOFF AT 200 FEET ▶	100 dB	
BUSY URBAN STREET ▶	80 dB	VERY LOUD
FREEWAY TRAFFIC AT 50 FEET ▶	60 dB	LOUD
CONVERSATION AT 6 FEET ▶	40 dB	MODERATE
TYPICAL OFFICE (INTERIOR) ▶	20 dB	
SOFT RADIO MUSIC ▶	0 dB	FAINT
RESIDENTIAL (INTERIOR) ▶		VERY FAINT
TYPICAL WHISPER AT 6 FEET ▶		
HUMAN BREATHING ▶		

Source: Brown-Buntin Associates

Noise in the community has often been cited as being a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from the interference with human activities such as sleep, speech, recreation, and tasks demanding concentration or coordination. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases, and the acceptability of the environment for people decreases. This decrease in acceptability and the threat to public well-being is the basis for land use planning policies directed towards the prevention of exposure to excessive community noise levels. There are also economic effects of community noise: reduction in property values, inefficiency in the workplace and lost hours due to stress.

To control noise from existing fixed sources, many jurisdictions have adopted community noise control ordinances. Such ordinances are intended to abate noise nuisances and to control noise from existing sources. They may also be used as planning tools if applied to the potential creation of a nuisance, or to potential encroachment of sensitive uses upon noise-producing facilities. Community noise control ordinances are generally designed to resolve noise problems on a short-term basis (usually by means of hourly noise level criteria), rather than on the basis of 24-hour or annual cumulative noise exposures.

Criteria for Acceptable Noise Exposure:

The Guidelines for the Preparation and Content of the Noise Element of the General Plan, includes recommendations for exterior and interior noise level standards to be used by local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The State Guidelines contain a land use compatibility table which describes the compatibility of different land uses with a range of environmental noise levels in terms of Ldn or CNEL. An exterior noise environment of 50 to 60 dB Ldn or CNEL is considered to be "normally acceptable" for residential uses according to those guidelines. The recommendations in the State

Guidelines also note that, under certain conditions, more restrictive standards may be appropriate. As an example, the standards for quiet suburban and rural communities may be reduced by 5 to 10 dB to reflect lower existing outdoor noise levels.

The U.S. Environmental Protection Agency (EPA) also prepared guidelines for community noise exposure in the publication Information on the Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. These guidelines are based upon assumptions regarding acceptable noise levels which consider occupational noise exposure as well as noise exposure in the home. The guidelines recognize an exterior noise level of 55 dB Ldn as a goal to protect the public from hearing loss, activity interference, sleep disturbance and annoyance. The EPA notes, however, that this level is not a regulatory goal, but is a level defined by a negotiated scientific consensus without concern for economic and technological feasibility or the needs and desires of any particular community. The EPA and other governmental agencies have adopted suggested land use compatibility guidelines which indicate that residential noise exposures of 55 to 65 dB Ldn are within acceptable limits.

For control of noise nuisances, a community noise control ordinance is the most appropriate tool. The State Office of Noise Control has prepared a Model Community Noise Control Ordinance which contains recommended noise standards in terms of "time-weighted" sound levels. The time-weighting concept allows discrimination of both short- and long-term noise exposures, and sets allowable levels for each. The Model recommends more stringent standards for residential land uses than for commercial and industrial, with the most stringent standards recommended for "rural suburban" situations. The primary exterior noise standard for rural residential uses is 50 dB in the daytime hours (7 a.m. to 10 p.m.), and 40 dB at night. The standard is expressed in terms of the level exceeded for 30 minutes of an hour, equivalent to the median level, or L50. This ordinance format is successfully applied in many California cities and counties.

The U.S. Environmental Protection Agency has also prepared a

Model Community Noise Control Ordinance using the "Equivalent A-weighted Sound Level" (Leq) as the means of defining allowable noise level limits. The EPA model contains no specific recommendations for local noise level standards, but reports a range of Leq values as adopted by various local jurisdictions. The mean daytime noise standard reported by the EPA is 56.75 dB (Leq); the mean nighttime noise standard is 51.76 dB (Leq). This ordinance format has been successfully applied by the City and County of San Diego and by many other jurisdictions looking for a simplified approach to the enforcement of a local noise control ordinance.

In addition to the A-weighted noise level, other factors should be considered in establishing criteria for noise sensitive land uses. For example, sounds with noticeable tonal content such as whistles, horns, or droning or high-pitched sounds may be more annoying than the A-weighted sound level alone will suggest. Many noise standards apply a penalty, or correction, of 5 dB to such sounds. The effects of unusual tonal content will generally be more of a concern at nighttime, when residents may notice the sound in contrast to previously-experienced background noise.

Because many rural residential areas experience very low noise levels, residents may express concern about the loss of "peace and quiet" due to the introduction of a sound which was not audible previously. In very quiet environments, the introduction of virtually any change in local activities will cause an increase in noise levels. A change in noise level and the relative loss of "peace and quiet" is the inevitable result of land use or activity changes in such areas. Audibility of a new noise source and/or increases in noise levels within recognized acceptable limits are not usually considered to be significant noise impacts, but these concerns should be addressed and considered in the planning and environmental review processes.

Table 24 is commonly used to show expected public reaction to changes in environmental noise levels. This table was developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise, or to changes in levels of a

given noise source. It is probably most applicable to noise levels in the range of 50 to 70 dB, the usual range of voice and interior noise levels. It is probably not directly applicable to public perception of identifiable intrusive noise sources in very quiet environments because of the difference in frequency content between background noise sources and intrusive sounds, as well as the fact that the absolute amount of energy required to make a given change in sound pressure level is much smaller at low noise levels than at higher levels. Table 24 should therefore only be applied in a general manner to show the relationship between changes in sound energy, sound pressure levels and subjective reaction.

The comparisons of subjective reaction outlined in Table 24 are not applicable to noise exposures which are very quiet or very loud. For example, a whisper which is increased by 10 decibels, e.g., from 20 dB to 30 dB, remains a whisper, and would still be described as quiet. In contrast, an increase in the noise level of a diesel locomotive from 90 dB to 100 dB would be a change from a loud noise to a very loud noise. Thus the subjective reaction to a 10 dB change in either case may be different, even though the change in level is the same.

TABLE 24

SUBJECTIVE REACTION TO CHANGES IN NOISE LEVELS OF SIMILAR SOURCES

Increase in Sound Pressure Level, dB	Relative Increase in Acoustical Energy	Subjective Reaction
1	1.26 times	Minimum Detectable Change (Lab)
3	2 times	Usually Noticeable Change
5	3.2 times	Definitely Noticeable Change
10	10 times	Twice as Loud as Before

Source: Various, reported by Brown-Buntin Associates, Inc.

APPENDIX B

REQUIREMENTS FOR AN ACOUSTICAL ANALYSIS

An acoustical analysis prepared pursuant to the Noise Element shall:

- A. Be the financial responsibility of the applicant.
- B. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
- C. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and significant noise sources. Where actual field measurements cannot be conducted, all sources of information used for calculation purposes shall be fully described.
- D. Estimate existing and projected (20 years) noise levels and compare those levels to the adopted policies of the Noise Element. Projected future noise levels shall take into account noise from planned streets, highways and road connections.
- E. Recommend appropriate mitigation to achieve compliance with the adopted policies of the Noise Element, giving preference to proper site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings

which contain noise-sensitive land uses.

- F. Estimate noise exposure after the prescribed mitigation measures have been implemented.

APPENDIX 1 City Council Resolution

Resolution No. _____

ADOPTED _____

THE CITY COUNCIL OF THE CITY OF _____
DOES HEREBY RESOLVE THAT

1. WHEREAS the City Council of the City of _____

WHEREAS the City Council of the City of _____

WHEREAS the City Council of the City of _____

WHEREAS the City Council of the City of _____

WHEREAS the City Council of the City of _____

WHEREAS the City Council of the City of _____

WHEREAS the City Council of the City of _____

WHEREAS the City Council of the City of _____

WHEREAS the City Council of the City of _____

APPENDICES

1 CITY COUNCIL RESOLUTION

2 PLANNING COMMISSION RESOLUTION

APPENDIX 1

City Council Resolution

AGENDA ITEM NO. 8b

RESOLUTION 94-52

BEFORE THE CITY COUNCIL CITY OF KERMAN, STATE OF CALIFORNIA

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF KERMAN APPROVING THE KERMAN GENERAL PLAN

WHEREAS, at a regular meeting of the City Council of the City of Kerman (the "City Council") duly called and held on June 21, 1994, at 7:30 p.m., and continued until November 1, 1994, it was moved by Council member Durham and second by Council member Rodriguez and carried that the following resolution be adopted:

WHEREAS, the City of Kerman (the "City") has prepared a General Plan Update to the Kerman General Plan consistent with Government Code Section 65350, et seq.; and

WHEREAS, said General Plan Update includes the following General Plan Elements: 1) Land Use, 2) Circulation, 3) Conservation, Open Space, Parks and Recreation, 4) Safety and 5) Noise; and

WHEREAS, the City has prepared a Draft Environmental Impact Report (the "DEIR") on the General Plan Update consistent with the California Environmental Quality Act of 1970 (CEQA), as amended, and the state and local environmental guidelines and regulations; and

WHEREAS, the City of Kerman conducted four public workshops in 1993 to solicit input on the goals and policies of the Kerman General Plan Update, and the location of future land uses, streets, parks, and public facilities; and

WHEREAS, the City of Kerman conducted three joint City Council/Planning Commission study sessions to review the Kerman General Plan Update and corresponding land use and circulation maps; and

WHEREAS, the Kerman General Plan Update and Draft Environmental Impact Report (the "DEIR") was released on March 15, 1994, for circulation as required under CEQA; and

WHEREAS, local agencies, organizations and parties have received the DEIR and the State Office of Planning and Research assigned the DEIR a State Clearinghouse Number, SCH # 94032066, circulated the DEIR among state agencies and set May 18th as the deadline for comments; and

WHEREAS, a public hearing notice and corresponding general plan maps were published in the Kerman News 15 days prior to the Planning Commission's public hearing on the General Plan Update and DEIR on February 28, 1994; and

WHEREAS, the Planning Commission accepted public testimony, both verbal and written, both in favor of and against the General Plan Update and DEIR on February 28th and March 14th, reviewed the Planning Department's staff report and recommended approval of the General Plan Update and DEIR to the Kerman City Council.

NOW, THEREFORE, BE IT RESOLVED by the City Council that the following findings are hereby considered and adopted regarding the Kerman General Plan Update and Draft EIR.

1. The City Council hereby determines that the DEIR was prepared in compliance with the California Environmental Quality Act of 1970, as amended, and that it has reviewed and considered the information contained in the DEIR in connection with the adoption of the General Plan Update.

2. That a public hearing was held on the Draft Environmental Impact Report prepared for the Kerman General Plan Update by the City Council and that the City Council will certify the Final EIR under a separate resolution.

3. That the City Council recognizes that the adoption of the General Plan Update, as proposed, will cause certain unavoidable adverse environmental effects. Consistent with Section 15093 of CEQA, these effects are listed as follows: 1) removal of agricultural land from production; 2) a deterioration in air quality; and 3) potential overcrowding of schools.

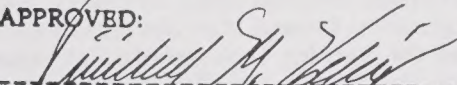
4. That the General Plan Update and the elements contained within will protect and enhance the public's health, safety and welfare throughout the planning period, and that the General Plan will assure that Kerman's fiscal condition will remain viable throughout the planning period by requiring that there be a proper balance between the collection of development impact fees and the level of public services and infrastructure provided by the City of Kerman.

BE IT FURTHER RESOLVED by the City Council that the changes to the Kerman General Plan Update described in an Attachment A (memorandum to City Council)

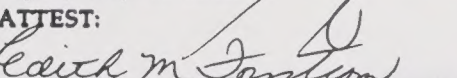
and delineated in Exhibit 3 (Land Use Element map), Exhibit 4 (Circulation Element map) and Exhibit 10 (Generalized Future Parks and Recreation Facilities map).

Passed and adopted at a regular meeting of the Kerman City Council held on November 1, 1994, by the following vote.

AYES: Vital, Rodriguez, Durham
NOES: Toste, Garcia
ABSENT: None
ABSTAIN: None

APPROVED: 

Mayor, City of Kerman

ATTEST: 

City Clerk, City of Kerman

APPENDIX 2

Planning Commission Resolution

RESOLUTION 94- 03

BEFORE THE PLANNING COMMISSION
CITY OF KERMAN, STATE OF CALIFORNIA

A RESOLUTION OF THE PLANNING COMMISSION OF THE
CITY OF KERMAN APPROVING THE KERMAN GENERAL
PLAN AND DRAFT ENVIRONMENTAL IMPACT REPORT

WHEREAS, at a regular meeting of the Planning Commission of the City of Kerman (the "Planning Commission") duly called and held on March 28, 1994, at 6:30 p.m., it was moved by Commission member Vann and second by Commission member Pereira and carried that the following resolution be adopted:

WHEREAS, the City of Kerman (the "City") has prepared a General Plan Update to the Kerman General Plan consistent with Government Code Section 65350, et. seq.; and

WHEREAS, said General Plan Update includes the following General Plan Elements: 1) Land Use, 2) Circulation, 3) Conservation, Open Space, Parks and Recreation, 4) Safety and 5) Noise; and

WHEREAS, the City has prepared a Draft Environmental Impact Report (the "DEIR") on the General Plan Update consistent with the California Environmental Quality Act of 1970 (CEQA), as amended, and the state and local environmental guidelines and regulations; and

WHEREAS, the City of Kerman conducted four public workshops in 1993 to solicit input on the goals and policies of the Kerman General Plan Update, and the location of future land uses, streets, parks, and public facilities; and

WHEREAS, the City of Kerman conducted three joint City Council/Planning Commission study sessions to review the Kerman General Plan Update and corresponding land use and circulation maps; and

WHEREAS, the Kerman General Plan Update and Draft Environmental Impact Report (the "DEIR") was released on March 15, 1994, for circulation as required under CEQA; and

WHEREAS, local agencies, organizations and parties have received the DEIR and the State Office of Planning and Research assigned the DEIR a State Clearinghouse Number, SCH # 94032066, circulated the DEIR among state agencies and set April 18th as the deadline for comments; and

WHEREAS, a public hearing notice and corresponding general plan maps were published in the Kerman News 15 days prior to the Planning Commission's public hearing on the General Plan Update and DEIR on February 28, 1994; and

WHEREAS, the Planning Commission accepted public testimony, both verbal and written, both in favor of and against the General Plan Update and DEIR on February 28th and March 14th.

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission that the following findings are hereby considered and adopted regarding the Kerman General Plan Update and Draft EIR.

1. That a public hearing was held on the Draft Environmental Impact Report prepared for the Kerman General Plan Update by the Planning Commission and the Planning Commission having considered all the comments received thereon, the DEIR was determined to be adequate and is forwarded to the City Council with a recommendation for approval.

2. The Planning Commission hereby determines that the DEIR was prepared in compliance with the California Environmental Quality Act of 1970, as amended, and that it has reviewed and considered the information contained in the DEIR in connection with the adoption of the General Plan Update.

3. That the Planning Commission recognizes that the adoption of the General Plan Update, as proposed, will cause certain unavoidable adverse environmental effects. Consistent with Section 15093 of CEQA, these effects are listed as follows: 1) removal of agricultural land from production; 2) a deterioration in air quality; and 3) overcrowding of schools.

4. That the General Plan Update and the elements contained within will protect and enhance the public's health, safety and welfare throughout the planning period, and that the General Plan will assure that Kerman's fiscal condition will remain viable throughout the planning period by requiring that there be a proper balance between the collection of development impact fees and the level of public services and infrastructure provided by the City of Kerman.

Passed and adopted at a regular meeting of the Kerman Planning Commission held on March 28, 1994, by the following vote.

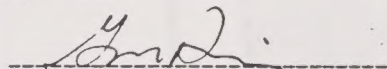
AYES: Vann, Souza, Yzaguirre, Dailey, Rossi, Pereira

NOES: None

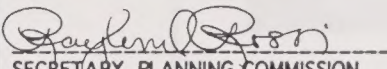
ABSENT: Vaughan

ABSTAIN: None

APPROVED:


CHAIRMAN, PLANNING COMMISSION

ATTEST:


SECRETARY, PLANNING COMMISSION

Part 2
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Part 2

Existing
Conditions



PART 2

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CHAPTER I

HUMAN ENVIRONMENT

CHAPTER 1

HUMAN ENVIRONMENT

CHAPTER 1 • HUMAN ENVIRONMENT

A. HISTORY

The site of Kerman was first established by the Southern Pacific Railroad Company as a way station with a pump and watering tank in 1891. The site was originally named Collis in honor of the president of the railroad Collis P. Huntington. It was at this site in 1892 that the famous Sontag and Evans gang held up the San Francisco-Los Angeles passenger train, one of the last train robberies in the country and perhaps the most historical event to occur in Kerman.

Settlement and cultivation of the Kerman area began and continued through the turn of the century as irrigation projects brought water to the area, primarily from the Kings River, to the south. In 1900, William G. Kerckhoff and Jacob Mansar purchased some 3,027 acres of land from the Bank of California. These men formed the Fresno Irrigated Farms Company. In 1906, Collis was renamed Kerman from the men's names Kerckhoff and Mansar. At this time, the Company began promoting land sales near Kerman across the country. The Company also filed the original townsite subdivision map with Fresno County, establishing the street grid encompassed by California Avenue, "G" Street, First Street and Ninth Street.

By 1914 Kerman had an estimated population of 400 persons surrounded by 29,000 acres of producing crop land. The Kerman Creamery was producing about 1,600 pounds of butter daily. In 1921, Madera Avenue was paved from the Southern Pacific railroad tracks north to the San Joaquin River and streetlights were installed

from the tracks to Whitesbridge Road. By 1936 development of Kerckhoff Park had begun.

Oil and gas exploration was being conducted several miles south of town and in 1941 culminated with (at the time) the development of the largest gas well in the state. In 1946, the residents of Kerman voted to incorporate, and the City of Kerman was born, with a population of 1,050 residents. In the 1950's new subdivisions began to develop, expanding the urban area outward from the original townsite.

New development and subdivision activity has continued to the present time. In 1979, the Kerman Shopping Center on the northwest corner of Whitesbridge Road and Madera Avenue was completed, establishing Kerman as a serious competitor in the west side retail-commercial market. More recently, the Kerman Industrial Park was planned and developed. With highway and rail access, several industrial operations have chosen to locate at this site and space remains for further industrial development.

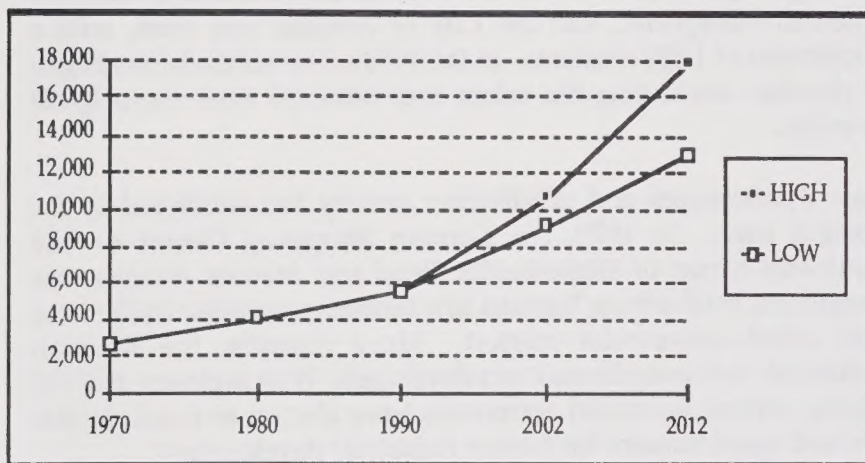
The 1990 Census showed Kerman to have 5,448 residents, making it the eleventh largest city of Fresno County. Interestingly, the 1973 Kerman General Plan predicted that Kerman would have a 1990 population ranging from a low of 4,400 to a high of 5,100 persons.

B. POPULATION

Kerman's population has shown a steady increase during the last ten years. The population in 1990 stood at 5,448 persons, compared to 4,002 persons in 1980, an increase of 36.2 percent over ten years, or an average of 3.6 percent per year. The City did experience minor declines in population from 1980 to 1982 but the population has increased since that time growing most robustly during 1989-1990 at a rate of 11.5%. Population growth is perhaps the central factor for establishing policies and determining new areas for development. For the purposes of the General Plan, population projections were developed representing low and high estimates. In ten years (2003) the estimates forecast a low population estimate

of 9,014, and a high population estimate of 10,648 persons. By the year 2013, the estimates forecast a low population estimate of 12,851, and a high population estimate of 17,931 persons.

TABLE 1
POPULATION ESTIMATES 1993 - 2013



Source: U.S. Census Bureau, California Department of Finance, Collins & Associates, 1993.

C. SOCIOECONOMIC CONDITIONS

Income

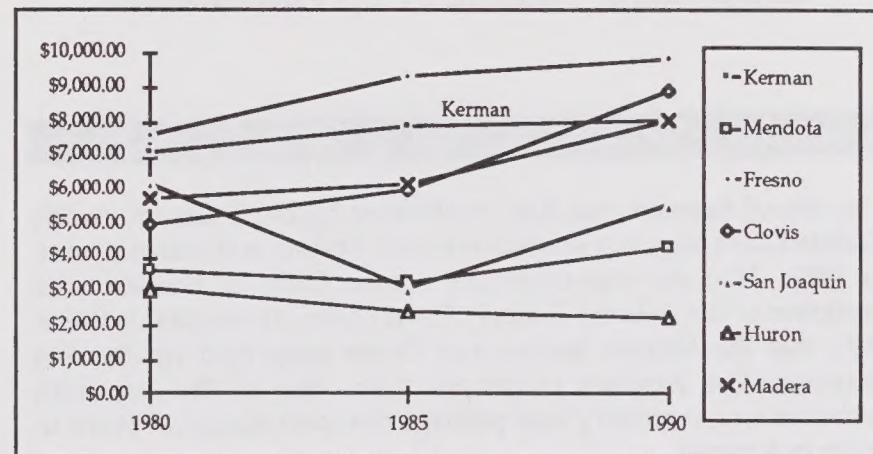
The 1990 Census showed Kerman's household median income at \$22,699. This compares to a median household income of \$26,377 for Fresno County and \$36,370 for the State of California.

Retail Sales

Taxable retail sales in a city are a measure of that community's economic vitality. Studies have shown that one percentage point of the six percent sales tax is retained by the City in which the sale takes place. In other words, from the tax charged to every one

hundred dollars of goods sold in a city, six cents goes to the local government of that community. Table 2 shows that Kerman has a relatively high per capita sales rate in comparison to other neighboring cities.

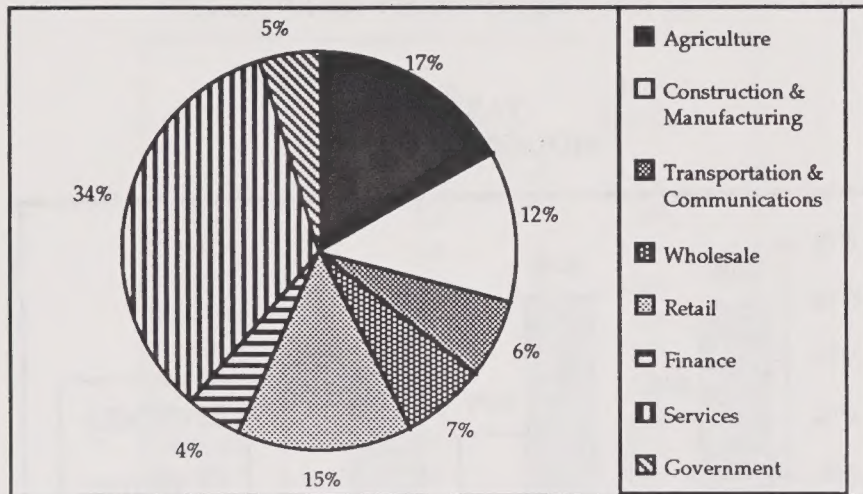
TABLE 2
PER CAPITA TAXABLE SALES 1980 - 1990



Source: California State Board of Equalization, 1980 - 1990

Employment

Despite Kerman's location in the center of a highly productive agricultural area, agriculture is not the dominant employer in the community. This position is occupied by the Services category, employing 34 percent of the city's work force. This category includes business and repair services, personal services, entertainment and recreation services, professional services, health services, educational services and other services. Agriculture is the next largest employer, with 17% of the city's work force. In contrast to some other cities in the region, Kerman does not have extensive packing houses and agricultural processing facilities in its industrial area.

TABLE 3
EMPLOYMENT

Source: U.S. Census Bureau, 1990

In terms of individual employers in Kerman, the Kerman Unified School District is the single largest employer. Table 4 identifies the city's major employers.

Ethnicity

Kerman's population is divided fairly evenly between the white and Hispanic groups. Table 5 shows the ethnic breakdown of the community's population

The percentage of Kerman's Hispanic population has grown considerably - from 31 percent of the city's population in 1980 to over 51 percent in 1990. Correspondingly, the white population has dropped from 66 percent in 1980 to 41 percent of the population in 1990.

TABLE 4
MAJOR KERMAN EMPLOYERS

NAME OF BUSINESS	PRODUCT/SERVICE	EMPLOYEES
Kerman Unified School Dist.	Education	330
Dole	Raisins & Almonds	90-160
Pacific Coast Packaging	Paper Boxes	75
Kerman Telephone Company	Communications	46
City of Kerman	Municipal Government	35
Villa Bianchi	Wine	26
Kerman State Bank	Financial	20
Bank of America	Financial	20
Helena Chemical	Chemical	15
Olson Farms	Egg Distributor	12
Community First Bank	Financial	10
Kerman Warehouse	Ag & Seed Processing	10
Sun Empire Foods	Candy	10
Volanti Concrete	Concrete	10
Zacky Farms	Chickens	8
Guarantee Savings & Loan	Financial	6

Source: Kerman Chamber of Commerce, 1992

TABLE 5
ETHNICITY

	White	Hispanic	Asian	Black	Other
Number	2253	2807	329	0	59
Percent	41.4%	51.5%	6.0%	0%	1.1%

Source: U.S. Census Bureau, 1990

D. HOUSINGType

The number of housing units in Kerman has increased by 335 units from 1980 to 1990. The number of single family dwellings decreased as a percentage of all dwellings while the number of multiple family dwellings increased. This parallels a trend being observed statewide. In 1980, single family homes accounted for about 70%, and multiple family dwellings about 20 percent of the city's dwellings. In 1990, single family dwellings had shrunk to about 63% while multiple family units had increased to about 29% of the total dwelling units. Mobile homes have decreased from about 11 % in 1980 to 8% of the total units in 1990. Specific information on the growth of dwelling units is shown in Table 6.

**TABLE 6
DWELLING UNITS BY TYPE**

Dwelling Type	1970		1980		1990	
	No. of units	% of total	No. of units	% of total	No. of units	% of total
Single-family	719	87.3%	983	69.6%	1,108	63.3%
Multi-family	103	12.5%	278	19.7%	506	29.0%
Mobile Homes	2	0.2%	152	10.7%	134	7.7%
Total:	824	100.0%	1,413	100.0%	1,748	100.0%

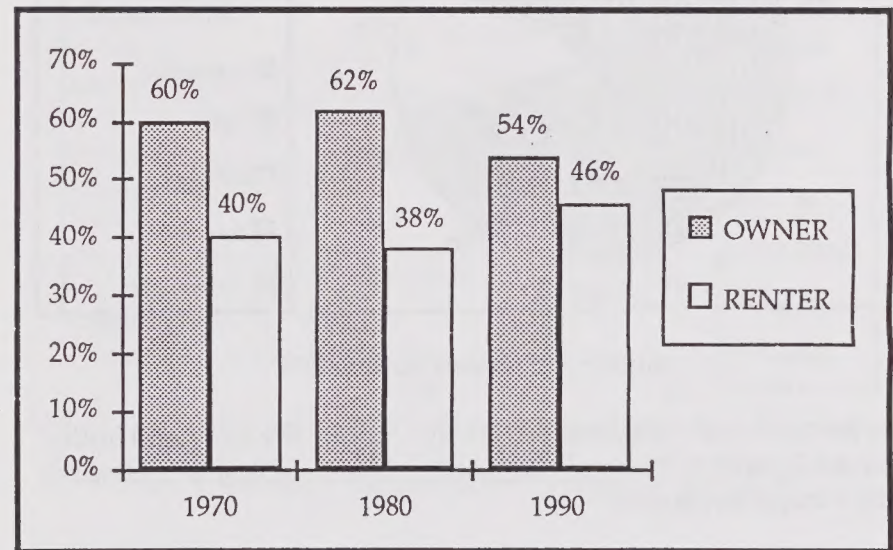
Source: California State Department of Finance, 1970, 1980, 1990.

Tenure

Tenure refers to whether a dwelling is occupied by its owner or is rented out to another party. Knowledge of housing tenure is important for planning purposes so that a community can appropriately plan for adequate areas for owner and renter-occupied housing. In Kerman, the percentage of owner-occupied

dwellings decreased from 62% to 54% of all dwellings from the period 1980 to 1990. Correspondingly, the number of renter-occupied units increased from 38% to 46% of all occupied units. Table 7 illustrates the change in tenure from 1970 to 1990.

**TABLE 7
HOUSING TENURE**



Source: U.S. Census 1970, 1980, and 1990.

Vacancy

The 1990 Census showed that Kerman had a vacancy rate of 0.8 for owner-occupied units and 4.2 for renter occupied units. The State of California has established target vacancy rates of two percent for owner-occupied households and five percent for renter-occupied households. Table 8 shows the vacancy rates for Kerman and surrounding cities as well as Fresno County.

TABLE 8
VACANCY RATES

	Owner Occupied	Renter Occupied
KERMAN	0.8	4.2
Fresno	1.9	6.5
Clovis	1.3	3.5
Madera	1.5	3.0
Mendota	1.4	2.8
Firebaugh	1.5	2.6
San Joaquin	0.0	1.5
Huron	0.9	0.9
Coalinga	2.7	14.3
Fowler	0.5	5.0
Fresno County	1.5	5.5

Source: U.S. Census Bureau, 1990.

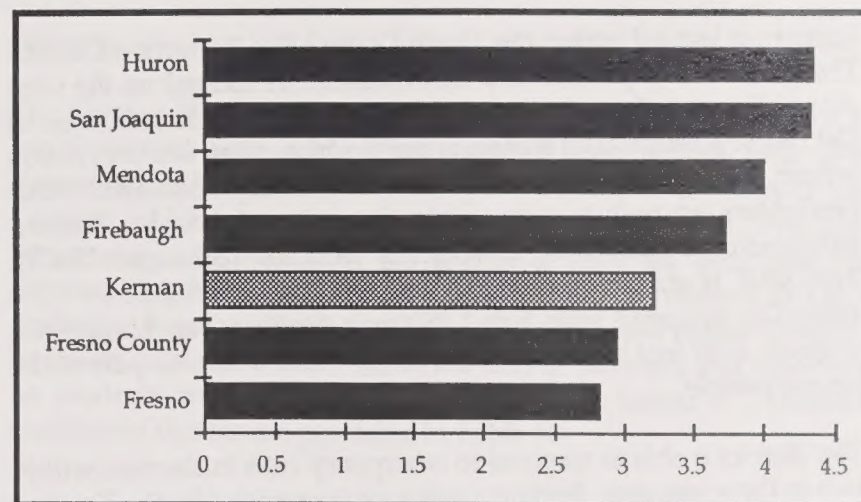
Overcrowding

The 1990 Census shows that 18 percent of Kerman's dwelling units are overcrowded. An overcrowded unit is defined as a unit with more than one person per room, excluding closets, bathrooms, hallways, etc. There were an average of 3.23 persons per unit in 1990. This compares with an average of 2.85 persons for Fresno County as a whole. Table 9 shows how Kerman compares with other cities in the region.

Housing Starts

Table 10 shows the number of housing additions from 1980 through 1992. The average number of new single family homes has grown since the early 1980's. Production of new multiple family dwellings and mobilehomes has been more erratic.

TABLE 9
PERSONS PER OCCUPIED DWELLING UNIT



Source: U.S. Census Bureau, 1990

TABLE 10
HOUSING STARTS

Year	Single family	Multiple family	Mobilehomes
1981	2	0	0
1982	2	0	0
1983	6	44	5
1984	11	68	0
1985	14	25	19
1986	6	126	0
1987	18	0	0
1988	40	0	3
1989	37	0	0
1990	48	100	0
1991	60	8	0
1992	34	8	0
TOTAL	278	379	28

Source: City of Kerman, 1993, California Department of Finance, 1981-1992.

E. PUBLIC SERVICES

Fire Protection

Kerman is located within the North Central Fire Protection District. The district headquarters and main station are located on the west side of Kerman along the north side of Kearney Boulevard, west of Del Norte Avenue. The station is staffed by a chief, fire prevention officer, training officer, dispatcher and office assistant. Four firefighters are on duty at any given time. One of these is a licensed paramedic, another is an Emergency Medical Technician (EMT). This staff is complemented by ten volunteer firefighters. The station is equipped with two 1,250 gpm (gallons per minute) fire engines, a 65 foot aerial ladder (750 gpm) as well as a paramedic rescue vehicle.

The district is able to respond to emergency calls in Kerman within two to three minutes. Backup assistance is provided by the Kearney Park Station located on Kearney Boulevard about eight miles east of Kerman. The Biola Station (about nine miles to the northeast) may also respond to emergency events in Kerman.

Interviews with fire district personnel indicate that all developed areas of the city are connected to the city's water system and water pressure is sufficient in all areas for fire fighting purposes. Pressure in most areas is about 40-55 pounds per square inch. Recent expansion of the water system has improved the Insurance Service Office (ISO) rating for Kerman from 6 to 5. Areas immediately outside of city limits have a rating of six, ranging to eight and nine further from the urban area. In addition to improvements in the water system, the Kerman City Council recently approved an ordinance requiring fire sprinklers to be installed in new and remodeled structures larger than 5,000 square feet.

Recent funding cuts have caused the North Central Fire District to downsize their Kerman operations. The Kerman station lost one fire engine as a result of the cuts.

Police Protection

Police protection is provided by the Kerman Police Department, with offices at City Hall. The Department is staffed by a chief, one lieutenant, one sergeant, nine full-time sworn officers, a records manager and a records clerk. The force is complemented by one reserve sergeant, four reserve officers and a volunteer Community Service Officer. The City aims to maintain an officer-to-citizen ratio of 2:1,000. At a minimum, there is one unit on patrol at any given time. In addition to patrol services, the Department operates the DARE (Drug Abuse Resistance Education) program. The officer in charge of this program also acts as a liaison between the County juvenile probation officer and the school district.

Kerman City Hall houses two holding cells which are used for transporting arrested persons to Fresno County Jail in Fresno. Kerman has a mutual aid agreement with the Fresno County Sheriff's Department. The Sheriff has a substation located on Kearney Boulevard in space shared with North Central Fire District. The Sheriff's Department also handles dispatch duties for Kerman.

Total calls for service in 1992 were 1,834. This represents an increase of 15.8 percent over 1991. Table 11 identifies activity in the Department since 1989.

TABLE 11
POLICE CALLS FOR SERVICE

	1992	1991	1990	1989
Assault	108	102	99	97
Auto Theft	126	83	41	39
Burglary	130	96	128	131
Homicide	0	1	1	0
Rape	1	4	2	6
Robbery	8	14	3	2
Traffic	282	233	158	104
Other	1,140	1,051	1,146	1,206
Total	1,834	1,584	1,578	1,585

Source: Kerman Police Department, 1993.

Medical Facilities

Kerman currently has no hospital. The closest hospital to Kerman is Community Hospital in Fresno, about fifteen miles east of Kerman. Fresno County also operates a public hospital in Fresno, Valley Medical Center. There are several health care professionals operating in Kerman, including two general practitioners, one optometrist, two chiropractors and three dentists. As mentioned in the discussion on fire protection, emergency medical response is provided by North Central Fire District, operating out of the Kerman station. Two medical personnel are on duty 24 hours per day at the station.

Solid Waste

Kerman contracts with Browning Ferris Industries (BFI) for solid waste collection. Collection is provided twice a week to residential, commercial and industrial customers. BFI hauls the solid waste to the American Avenue Landfill, about 6 miles southwest of Kerman. Occasionally, BFI trucks take waste to the Chateau Fresno landfill, (operated by BFI) located east of Kerman.

Policies regarding solid waste and recycling are contained in the Kerman Source Reduction and Recycling Element (SRRE). The Element estimated that in 1990, the City of Kerman generated 5,195 tons of solid waste, or 5.22 pounds per person per day. BFI indicated that in 1992, they hauled 4,500 tons of solid waste. This equates to 1,481 pounds per person, or 4.1 pounds per person per day. Data for previous years was not available, however, BFI officials indicated that the figure for 1992 is representative for the last several years. The apparent reduction in tonnage between the SRRE figure and BFI's figure may indicate that some waste is hauled by individuals and not set out for curbside pickup.

BFI also operates a recycling program in Kerman. The program was begun in the fall of 1991 and provides curbside pickup for newspaper, glass, plastic and aluminum. In 1992, 213 tons of these recyclables were collected. The program also collects used motor oil. In 1992, 936 gallons were collected.

Further information regarding solid waste and recycling is available in the Kerman Source Reduction and Recycling Element.

Schools

The Kerman Unified School District is composed of a high school, a continuation high school, one junior high school and two elementary schools. Exhibit No. 1 provides the boundaries of the District which encompasses a 146 square mile area. Primary education services within the planning area are provided by Kerman-Floyd Elementary School which has an enrollment of 1,023 students. Sun Empire Elementary is also operated by the District; however, it is not located within the City of Kerman, and there are no students from within the city limits that attend it. Student enrollment figures are provided in Table 12.

TABLE 12
KERMAN UNIFIED SCHOOL DISTRICT ENROLLMENT

SCHOOL	GRADES	NUMBER OF STUDENTS
Kerman-Floyd Elementary	K - 6	989
Sun Empire Elementary	K - 6	900
Kerman Middle School	7 - 8	500
Kerman High School	9 - 12	752
Nova Continuation School	9 - 12	45
TOTAL:		3,186

Source: Kerman Unified School District, 1993

In addition to the schools mentioned above, Kerman Unified School District offers a continuing education program. The continuing education program has an average daily attendance of 1,000

KERMAN UNIFIED SCHOOL DISTRICT

151 SOUTH FIRST STREET, KERMAN, CA 93630

EXHIBIT 1

SCHOOLS

1. KERMAN FLOYD ELEMNTARY SCHOOL, PS
2. KERMAN HIGH SCHOOL, HS
3. KERMAN JAMES HIGH SCHOOL, PS
4. KOWA HIGH SCHOOL, HS
5. KOWA-GRIFFIN ELEMNTARY SCHOOL, CT
6. ADMINISTRATIVE OFFICE, SO
7. PROPOSED SCHOOL, SITE P7

LEGEND

Schools

School District Boundary

State Highways

Railroads

Rivers

Canals

Non Paved Roads



Map of Kerman Unified School District
151 South First Street
Kerman, CA 93630
1:50,000 Scale
Original Map, July 1988
Updated

students. It is located at the community center at the corner of Madera and Whitesbridge Avenues in the Savemart shopping center.

Students within the district have a choice of attending any of three junior colleges in the area. Fresno City College is approximately 17 miles from Kerman and would be the likely choice for most Kerman residents. However, Kings River College in Reedley is only a 35-minute drive from Kerman and Coalinga Junior College is 55 miles from Kerman.

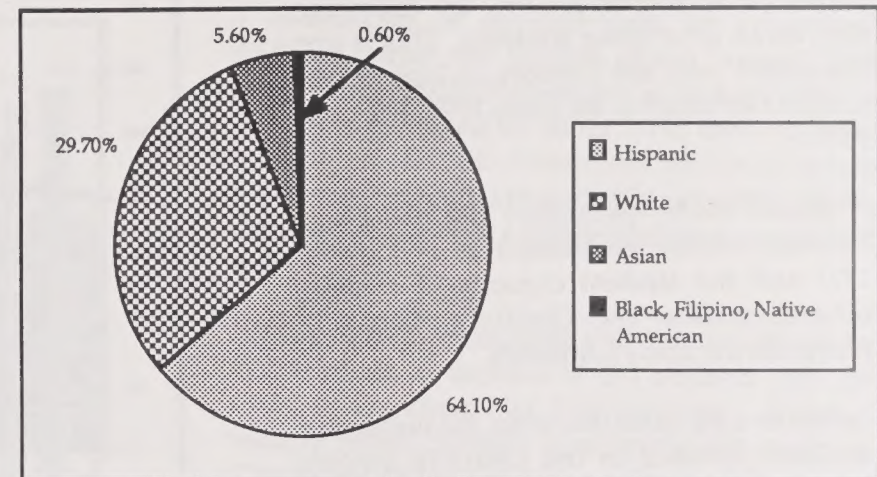
Two four-year colleges are located in nearby Fresno. California State University at Fresno provides students with a four-year degree, as well as many graduate programs. Fresno Pacific College is a four-year private college that is also conveniently located for residents of Kerman.

The ethnic background of students within the District varies somewhat from the ethnic background found city-wide. Within the District, 64.1 percent of the students are Hispanic and 29.1 percent are White. The City of Kerman has a Hispanic population of 51.5 percent. Table 13 illustrates the ethnic composition of the School District.

Kerman Unified School District operates four schools within the planning area, Kerman-Floyd Elementary (K-6), Kerman Middle School (7-8), Kerman High School (9-12), and Nova High School (continuation). A fourth school is located northwest of Kerman, outside of the planning area. Kerman-Floyd Elementary is located in the east side of the community. The 1993 enrollment was 989 students but has been as high as 1,024 in recent years. Capacity of the school is 868 students. Average class size is 29 students. The campus contains 34 classrooms. The school is currently considered to be overcrowded.

Kerman Middle School is located on First Street south of Kearney Boulevard. Enrollment at the middle school in 1993 was 500 students. The school has a capacity of 372 students. The 26-acre campus contains 20 classrooms, a baseball diamond, basketball

TABLE 13
SCHOOL DISTRICT ETHNICITY



Source: Kerman Unified School District, 1993

courts, gym and other outdoor play areas. Average class size is 25 students. Kerman Middle School is considered to be overcrowded.

Kerman High School is located on First Street, south of Whitesbridge Road. The 1993 enrollment at the high school is 708 students. The capacity of the school was 718 students. The 37-acre campus contains 33 classrooms, a stadium, baseball diamonds, tennis courts, basketball courts, a track, a gym and volleyball courts. The campus is at near capacity.

The school district has projected enrollments to the year 2001. By 2001, the District expects a total enrollment of 4,112 students. The consultant has extended these projections to 2013. These projections are shown in the following tables. The combined enrollment for 2013 is 5,884 students.

The projections provided by the District reflect existing and future enrollments for each class. In 1997 one can see a decrease in the

number of students in the seventh and eighth grades. This is due to a large number of students who are currently in the fourth and fifth grades. After this enrollment "peak" moves on to higher grades, the following class levels have fewer students. This is also the reason why the number of high school students levels off in the years 1999, 2000, and 2001.

A recent study quantified the difference between student enrollment as of October 1991 and the student capacity of existing schools within the District. Table 17 illustrates the study's findings.

As can be seen from this table, the number of students enrolled in the District's schools exceeds its classroom capacity by 495 students. The District has recently added several portable classrooms to alleviate this overcrowded condition.

Fees

The School District currently charges \$2.65 per square foot on residential construction and \$0.27 per square foot for industrial and commercial construction. At this time, under California State Law, \$2.65 is the maximum amount that can be charged on residential development. The School District has indicated that they feel this amount is insufficient compensation to accommodate new students generated by new development. The District is currently looking at ways to increase fees to pay for new facilities.

TABLE 14
GRADES K-6 ENROLLMENT PROJECTION

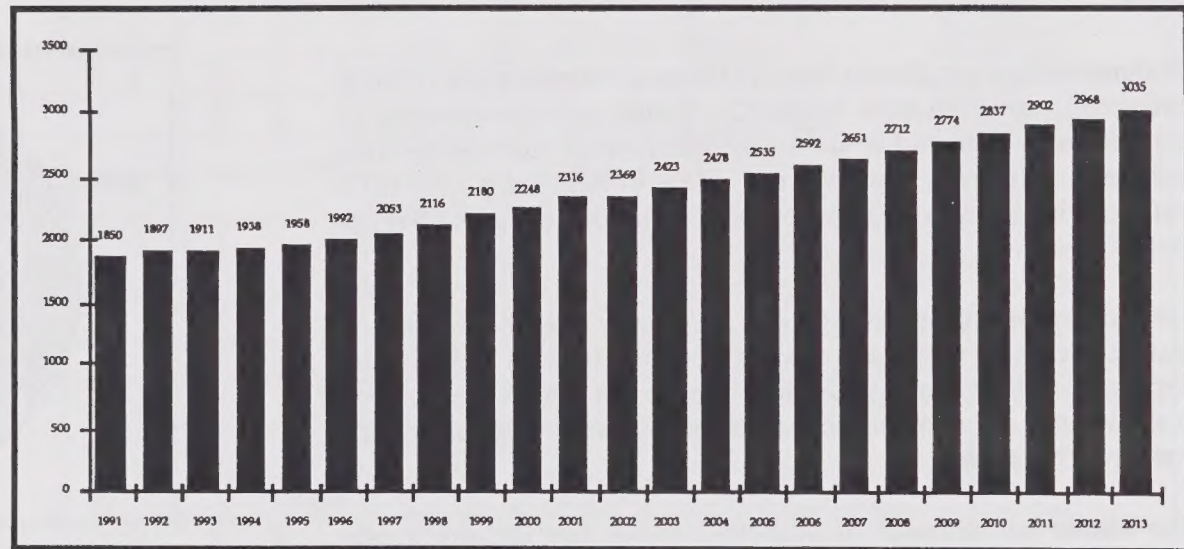


TABLE 15
GRADES 7-8 ENROLLMENT PROJECTION

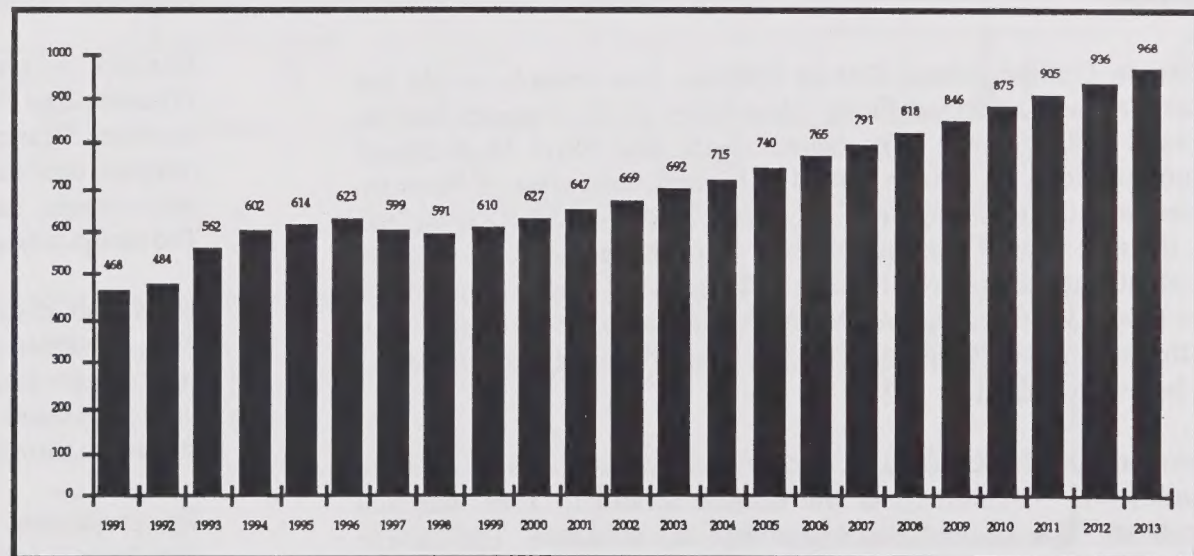
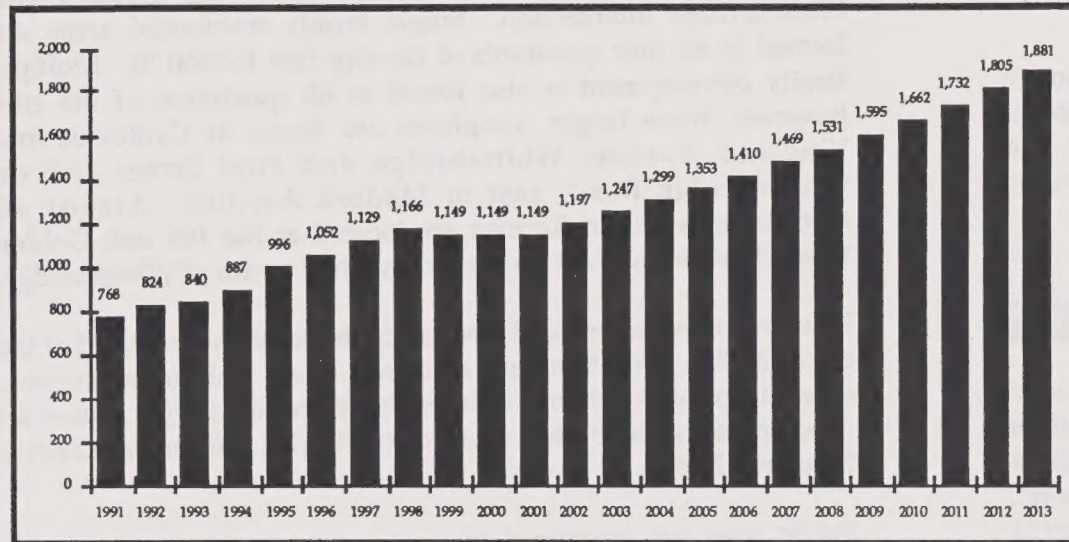


TABLE 16
GRADES 9 - 12 ENROLLMENT PROJECTION



Tables 14, 15, 16 - Source: Kerman Unified School District, 1993, Collins & Associates, 1993.

Future Plans

The expected continued growth, along with the existing overcrowded conditions within the District show a strong need for new facilities within the District. The School District has purchased a ten acre elementary school site located on the west side of Siskiyou near "E" Street. The School District is currently designing the site to accommodate 12 classrooms, office, and a multi-use building. However, at this time, funding from the State appears to be nonexistent. In addition, in the March, 1993 election, a citywide bond issue was defeated which would have generated the necessary funding for the school. In addition to the new elementary school, the District has plans to add ten classrooms at the middle school and add 16 classrooms at the high school. These plans may need to be placed "on hold" until funding can be secured.

Conclusions

The enrollment projections presented in Tables 14 - 16 indicate an obvious need for additional facilities during the lifetime of the General Plan update. By 2013, Elementary school enrollment will have increased by about 1,145 students over existing enrollment. Given that the district's two elementary schools are currently operating above capacity, at least one additional elementary school will be required.

Middle school enrollment will increase to about 970 students, an increase of 470 students over the existing enrollment of 500 students. Existing middle school capacity is currently 372 students. This points to the need for another middle school during the plan period.

High school enrollment is projected to increase to

TABLE 17
ENROLLMENT CAPACITY

School	K	Enrollment by Grade Level				Total
		1 - 6	7 - 8	9 - 12	Cont	
Kerman-Floyd Elementary	116	873				989
Sun Empire Elementary	118	782				900
Kerman Middle School			500			500
Kerman Unified High School				752		752
Nova Continuation School					45	45
Total Student Capacity	168	1,388	372	718	45	2,691
October 1993 enrollment	234	1,655	500	752	45	3,186
Excess of Capacity over Enrollment	66	267	128	34	-	495

Source: Kerman Unified School District, 1993

about 1,880 students, an increase of 1,128 students over the existing enrollment of 752 students. Existing high school capacity is currently 718 students. Therefore, at a minimum, significant expansion of the existing high school campus will be required by the end of the plan period.

In all cases, expansion of existing campuses through the addition of classrooms (as is planned) could serve to delay the construction of new schools. Other methods such as year round classes and increases in student/teacher ratios could help to delay expensive new construction.

F. LAND USE

The original Kerman township was laid out within the area bounded by California Avenue, "G" Street, First Street and Ninth Street. The township was plotted in the early 1900's. Madera Avenue was designed to serve as Kerman's "main street". Originally, it had a right of way that ranged from 100 to 200 feet in width, with 30 x 140 foot commercial lots fronting onto it. At the southern end of Madera Avenue, a 100 foot landscaped plaza was constructed. It still exists today and contains a mature grove of palm, magnolia and ash trees surrounded by lawn.

Residential lots, which were located east and west of Madera Avenue, were 50 x 140 feet. They fronted onto local streets that had a right of way of 60 feet. Separating each residential block was a 20 foot alley, which bisected each block north and south.

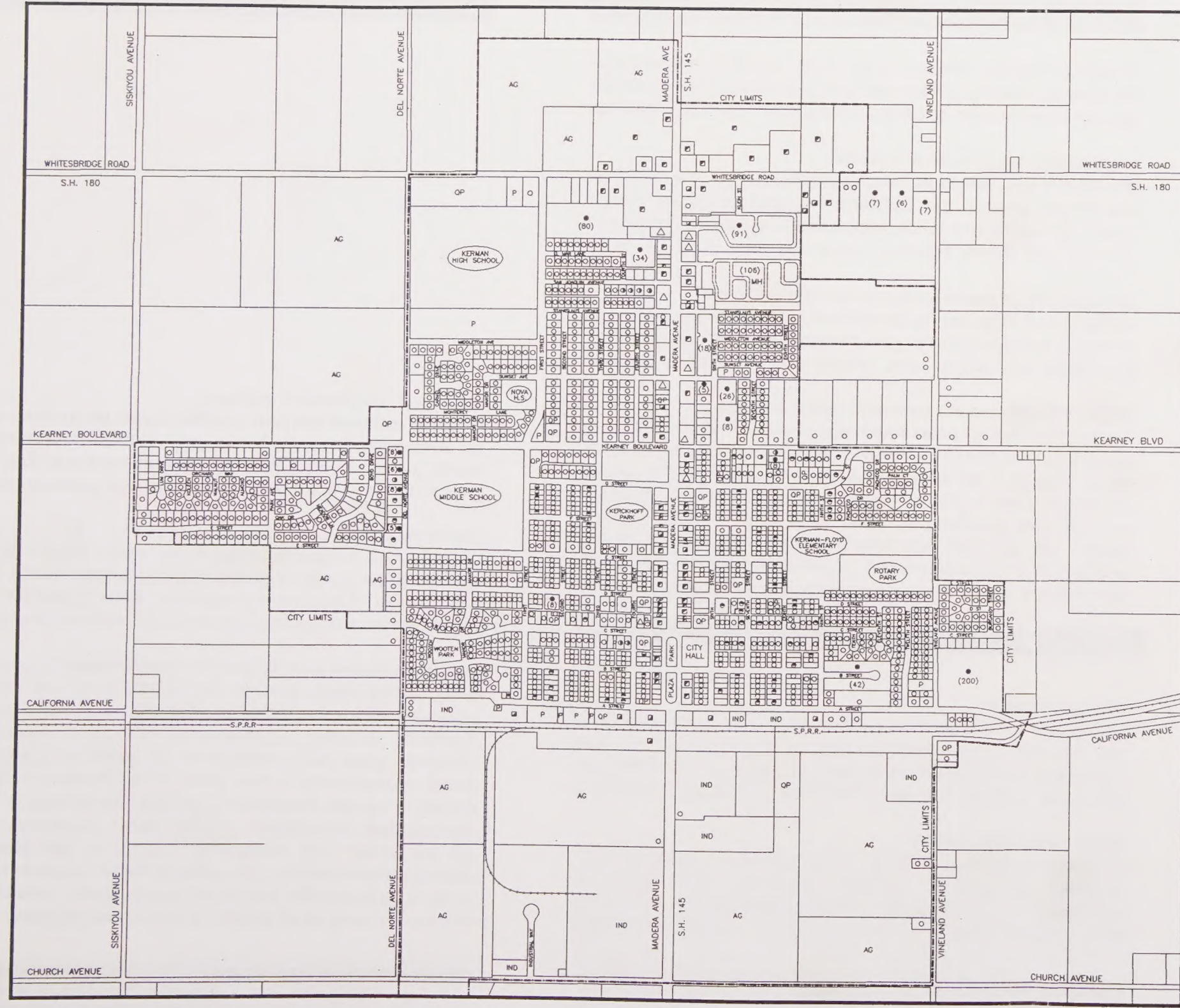
The City has grown primarily north and west since that time. Today, the urban area is centered roughly on Kearney Boulevard and Madera Avenue. The intersection of these two streets divides the city into four quadrants which provides a convenient setting for the discussion of land use in Kerman.

The urbanized portion of the city extends from Church Avenue on the south to north of Whitesbridge Road, and from east of Vineland Avenue to Siskyou Avenue on the west. Commercial and office

uses are clustered along Madera Avenue from California Avenue to north of Whitebridge, and along Whitesbridge Avenue on both sides of Madera Avenue. Two large shopping centers are located on the northwest and southwest corners of the Madera and Whitesbridge intersection. Single family residential areas are located in all four quadrants of the city (see Exhibit 2). Multiple family development is also found in all quadrants of the city, however, three larger complexes are found at California and Vineland Avenue, Whitesbridge and First Street and on Whitesbridge Road, east of Madera Avenue. Almost all mobilehomes within Kerman are located at the 106 unit Golden West Mobilehome Park on Madera Avenue, south of Whitesbridge.

Industrial uses are primarily located in the southern one-third of the city. Smaller operations are clustered along California Avenue, adjacent to the Southern Pacific Railroad tracks. Larger industrial developments are located south of the tracks, within the Kerman Industrial Park.

Public uses are scattered throughout the community. These mainly include schools, parks, city hall and other city buildings, and the wastewater treatment plant. Table 18 includes a breakdown of land use categories and their acreages within the Kerman city limits and within the Sphere of Influence.

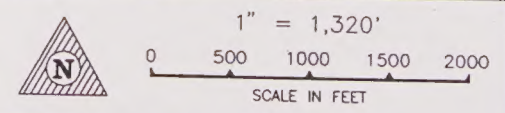


EXISTING LAND USES

- RESIDENTIAL USES**
- ONE DWELLING UNIT PER LOT
 - TWO DWELLING UNITS PER LOT
 - ⊙ THREE DWELLING UNITS PER LOT
 - ⦿ FOUR DWELLING UNITS PER LOT
 - ⊛ FIVE OR MORE UNITS PER LOT (NUMBER OF UNITS)
 - MH (25) MOBILE HOME PARK (NUMBER OF UNITS)
- COMMERCIAL USES**
- ▣ SERVICE COMMERCIAL
 - ▢ RETAIL COMMERCIAL
- PROFESSIONAL OFFICE USES**
- △
- QUASI-PUBLIC USES**
- QP
- PUBLIC USES**
- P
- INDUSTRIAL USES**
- IND
- AGRICULTURAL USES**
- AG

CITY OF KERMAN GENERAL PLAN UPDATE

EXHIBIT NO. 2



**COLLINS & ASSOCIATES
PLANNING CONSULTANTS**

Table 19 shows the totals for all land use within the planning area.

TABLE 18
EXISTING LAND USE ACREAGE
IN CITY LIMITS & SPHERE OF INFLUENCE

	<u>City Limits</u>			<u>Sphere of Influence</u>		
	Acres	Residential Units	Parcels	Acres	Residential Units	Parcels
Single Family	233	1,195	1,177	44	28	26
Multiple Family	45	662	59	11	43	6
Retail Commercial	48	0	52	1	0	1
Service Commercial	11	3	19	8	3	3
Office	6	0	19	0	0	0
Industrial	57	3	9	0	0	0
Public	151	0	37	2	0	1
Quasi-Public	16	0	21	1	0	4
Agricultural	204	0	7	941	0	50
Right of Way	302	0	0	129	0	0
Vacant	135	0	143	29	0	6
Total	1,222	1,863	1,543	1,165	48	97

Source: Collins & Associates, 1993.

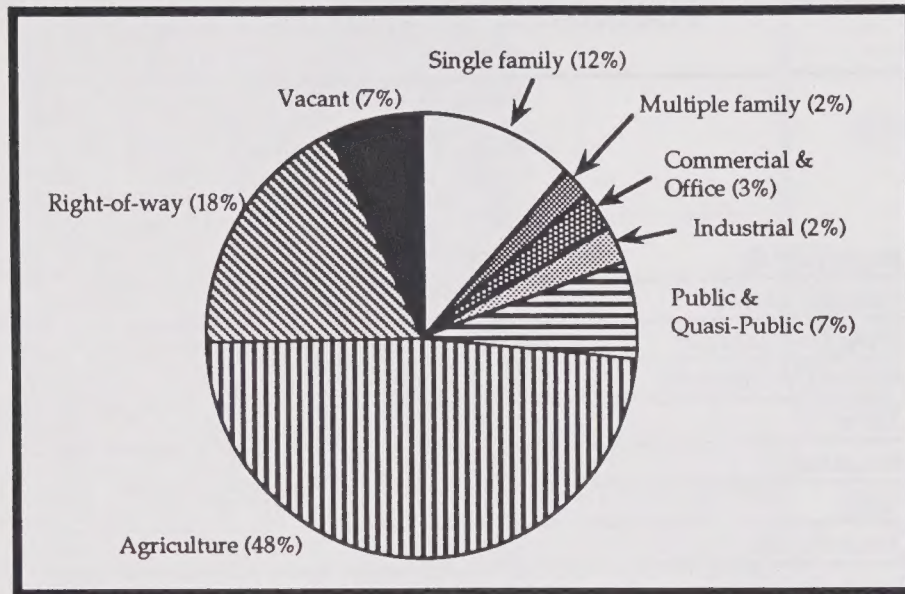
TABLE 19
PLANNING AREA LAND USE

	<u>Acres</u>	<u>Residential Units</u>	<u>Parcels</u>
Single Family	277	1,223	1,203
Multiple Family	56	705	65
Retail Commercial	49	0	53
Service Commercial	19	6	22
Office	6	0	19
Industrial	57	3	9
Public	153	0	38
Quasi-Public	17	0	25
Agricultural	1,145	0	57
Right of Way	431	0	0
Vacant	164	0	149
Total	2,373	1,911	1,640

Source: Collins & Associates, 1993

Table 20 shows a breakdown of the major land use categories within the planning area.

TABLE 20
PLANNING AREA LAND USE



Source: Collins & Associates, 1993

Table 21 shows acreage totals for Kerman's zone districts, including vacant acreage by zone. Exhibit 3 shows Kerman's zone districts and their acreages

Williamson Act Lands

The Williamson Act, passed by the state legislature in the early 1970's, was designed to prevent the premature urbanization of agricultural land. The act authorizes owners of agricultural land to enter into a contract with the County, which results in a reduced property tax rate in exchange for the land being maintained in agriculture. Upon approval, the contract runs for a period of ten years. The contract can be terminated in one of two ways. The

TABLE 21
EXISTING ZONING

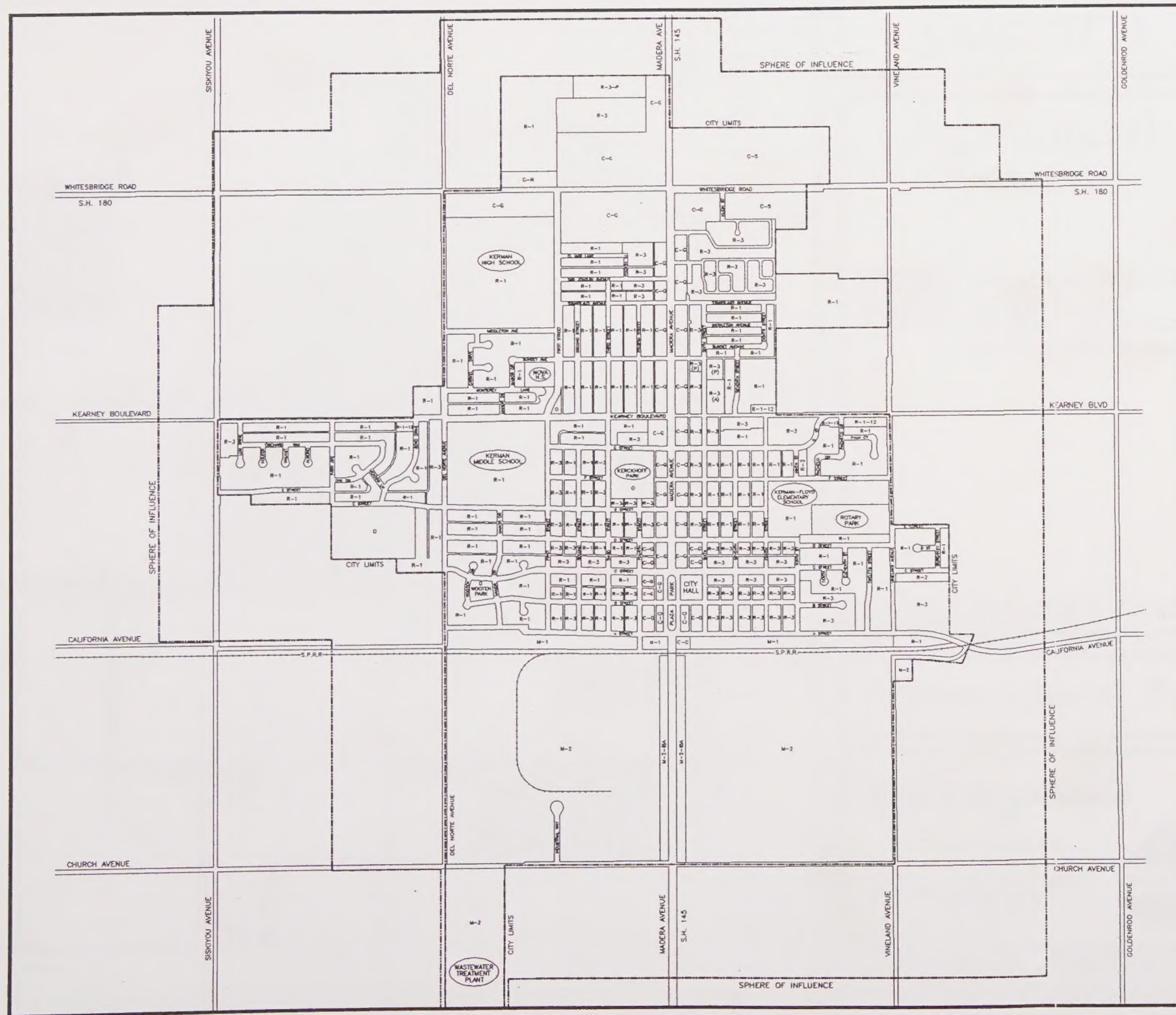
	ACRES	VACANT ACRES	LOTS	UNITS
UR	0	0	0	0
O	23	0	4	0
RR	0	0	0	0
R-1-12	2	0	6	5
R-1	341	71	83	946
R-2	8	0	2	200
R-3	92	4	309	718
PA	0	0	0	0
CN	0	0	0	0
CG	74	16	147	102
CS	37	6	14	1
M-1	24	3	18	3
M-2	323	241	18	3
Total	923	342	601	1,978

Source: Collins & Associates, 1993

owner of the property can file a Notice of Non-Renewal, which means that the owner will not renew the contract at the end of the ten year period, or the owner can remove the land immediately from the Williamson Act, however, the owner must pay taxes they were exempted from during the contract.

Termination of agricultural preserve contracts must be approved by the County Board of Supervisors and can be challenged by the City.

The location of Williamson Act Lands is important in land planning. Typically, new development is steered away from these lands. There are no properties within the City of Kerman currently under an agricultural preserve contract. However, there are 18 parcels within the Sphere of Influence under contract, totalling 337.5 acres. The location of these parcels are shown in Exhibit 4.



EXISTING ZONE MAP

ZONING CLASSIFICATIONS

- R RESIDENTIAL DISTRICTS
 - R-1-12 SINGLE-FAMILY (12,000 SQ. FT. MINIMUM LOT SIZE)
 - R-1 SINGLE-FAMILY (7,000 SQ. FT. MINIMUM LOT SIZE)
 - R-2 MULTIPLE-FAMILY / MEDIUM-HIGH DENSITY
 - R-3 MULTIPLE-FAMILY / HIGH DENSITY
- C COMMERCIAL DISTRICTS
 - C-N COMMERCIAL NEIGHBORHOOD
 - C-G COMMERCIAL GENERAL
 - C-S COMMERCIAL SERVICE
- M MANUFACTURING DISTRICTS
 - M-1 LIGHT MANUFACTURING
 - M-2 HEAVY MANUFACTURING
- O OPEN SPACE DISTRICT
- U-R URBAN RESERVE
- I-B-A INDUSTRIAL BOULEVARD AREA

CITY OF KERMAN GENERAL PLAN UPDATE

EXHIBIT NO. 3

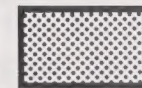


1" = 1,600'
0 500 1000 1500 2000
SCALE IN FEET

**COLLINS & ASSOCIATES
PLANNING CONSULTANTS**

EXHIBIT 4

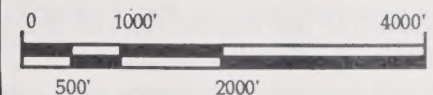
Agricultural Preserves



PARCELS ENTERED INTO
AGRICULTURAL
PRESERVE CONTRACTS
WITHIN PLANNING AREA

Base Map: Portion of Northeast quarter of the Kerman 15' Quadrangle
published by United States Geologic Survey, 1963, revised 1981.

Kerman General Plan

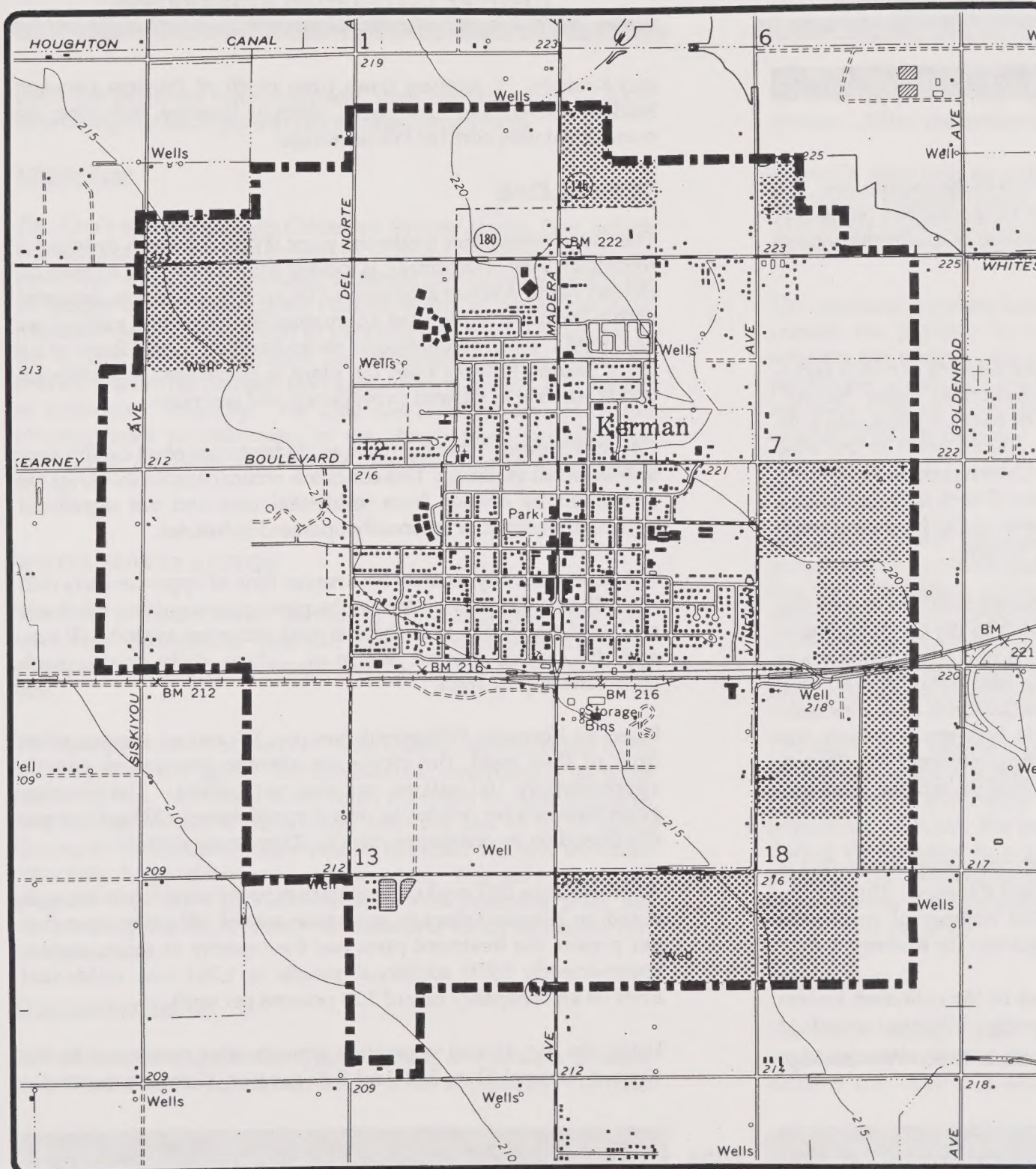


1 inch = 2,000 feet

--- PLANNING AREA
BOUNDARY



COLLINS & ASSOCIATES
PLANNING CONSULTANTS



G. INFRASTRUCTURE**SANITARY SEWER SYSTEM**

The City of Kerman provides sewer service to the community. The City's existing service area encompasses the developed portions of Kerman. Kerman's sewer system is composed of a collection system and waste water treatment plant.

Collection System

The sewage collection system consists of a network of 6-inch and 8-inch diameter "collection" lines that connect to larger "mains". Sewage from most of the southern half of Kerman flows into a 10-inch main in California Avenue via a 10-inch main in the alley between "B" Street and "C" Street and a 12-inch main in First Street. The northern half of Kerman drains into a 15-inch main in Kearney Boulevard. Most of the developed area west of Del Norte and south of Kearney drains to a 12-inch line in "E" Street.

The Kearney, "E", and California mains connect with an 18-inch line in Del Norte, which conveys sewage south to the City's treatment plant located south of Church Avenue. A new main recently was installed by the City to serve new development east of Vineland and the industrial area along Madera south of California. The new main consists of a 10-inch line in California between Vineland and Madera, an 18-inch line in Madera between California and Church, and a 27-inch line in Church between Madera and the treatment plant.

Kerman's collection system operates with one pump station that is located at the intersection of Siskiyou and Kearney. This facility currently receives flows from a limited number of residential dwelling units on Siskiyou and discharges into the Kearney line.

City staff reports that a number of lines in the collection system currently are flowing at or near their capacity. The most notable of these lines is the 8-inch line in First Street, between Whitesbridge

and Kearney. It receives flows from much of the area between Madera Avenue and First Street, north of Kearney, including the commercial uses north of Whitesbridge.

Treatment Plant

The City's wastewater treatment plant (WWTP), which provides a secondary level of treatment, is located south of Church Avenue on the Del Norte Avenue alignment. The existing plant was designed with a hydraulic capacity of approximately 1.2 million gallons per day (mgd). It can accommodate short-duration "peak" flows of 1.6 mgd. Treated effluent from the plant is discharged into disposal ponds where it is allowed to evaporate and percolate.

City staff indicated that the flows at the treatment plant exhibit very little seasonal variation. This condition occurs because the flows are dominated by sewage from residential uses and not significant agriculture-related or seasonally operated industries.

The plant currently receives an average flow of approximately 0.63 mgd. The typical flow pattern at the plant consists of two relatively short-duration peaks, with the first peak occurring around 8:00 a.m. and the second around 6:00 p.m. These daily peaks reach approximately 1.2 mgd.

Based on Kerman's 1993 population of 6,323 and an average plant flow of 0.63 mgd, the city-wide sewage generation rate is approximately 100 gallons per day per person. The average generation rate per residential unit is approximately 323 gallons per day (based on an occupancy rate of 3.23 persons per unit).

Approximately 0.57 mgd of the plant's capacity currently is unused. Based on Kerman's sewage generation rate of 100 gallons per day per person, the treatment plant has the capacity to accommodate approximately 5,700 additional people or 1,765 new residential units (at an occupancy rate of 3.23 persons per unit).

Using the two annual population growth rates mentioned in the Kerman General Plan, 3.61 and 5.35 percent, Kerman's treatment

plant has sufficient reserve capacity until the years 2004 or 2009, depending on which growth rate Kerman experiences.

Master Plan

The City's existing Sewage Collection System Master Plan, which was adopted in 1979 (see Exhibit 5), is based on projected sewage flows that would be generated by future development under the 1979 General Plan. The Master Plan contained an evaluation of the collection system that existed in 1979 and identified deficiencies in the system. It also identified the improvements that would be needed to serve the planned land uses within Kerman's 1979 Sphere of Influence. Recently, the City has installed several of the improvements recommended in the Master Plan, including the main lines in California Avenue, Madera Avenue and Church Street.

WATER SUPPLY SYSTEM

The City provides water service to the community. The City withdraws groundwater from four recently drilled wells. The wells penetrate underlying aquifers, located at depths from 300 to 500 feet.

The total production capacity of these wells is approximately 8,500 gallons per minute (gpm). The current static water level in the wells is 85 to 90 feet. According to city staff, the depth to groundwater in Kerman has remained fairly stable over the past 10 to 15 years. During the San Joaquin Valley's recent extended drought, the water table only dropped approximately five feet. This stable condition suggests that the City's withdrawals and pumping from the surrounding area do not overly tax the rate at which the aquifer can be replenished.

Distribution System

Kerman's water distribution system consists of a network of water lines located in the streets and alleys of the community. To date,

there are approximately 1,400 connections to the City's water system; 1,200 of the connections are residential uses.

Kerman's water lines range in diameter from 4 to 12 inches. Much of the original network (south of Kearney) is composed of 4-inch lines, considered undersized by the City. The City's minimum standard for water lines is 6 inches.

The distribution system is adequate to satisfy current demands and provide the required Uniform Fire Code fire flows. The City operates the system with a pressure that ranges from 50 to 60 pounds per square inch (psi). Connected to the distribution system are three ground level storage tanks, which have a combined capacity of 40,000 gallons.

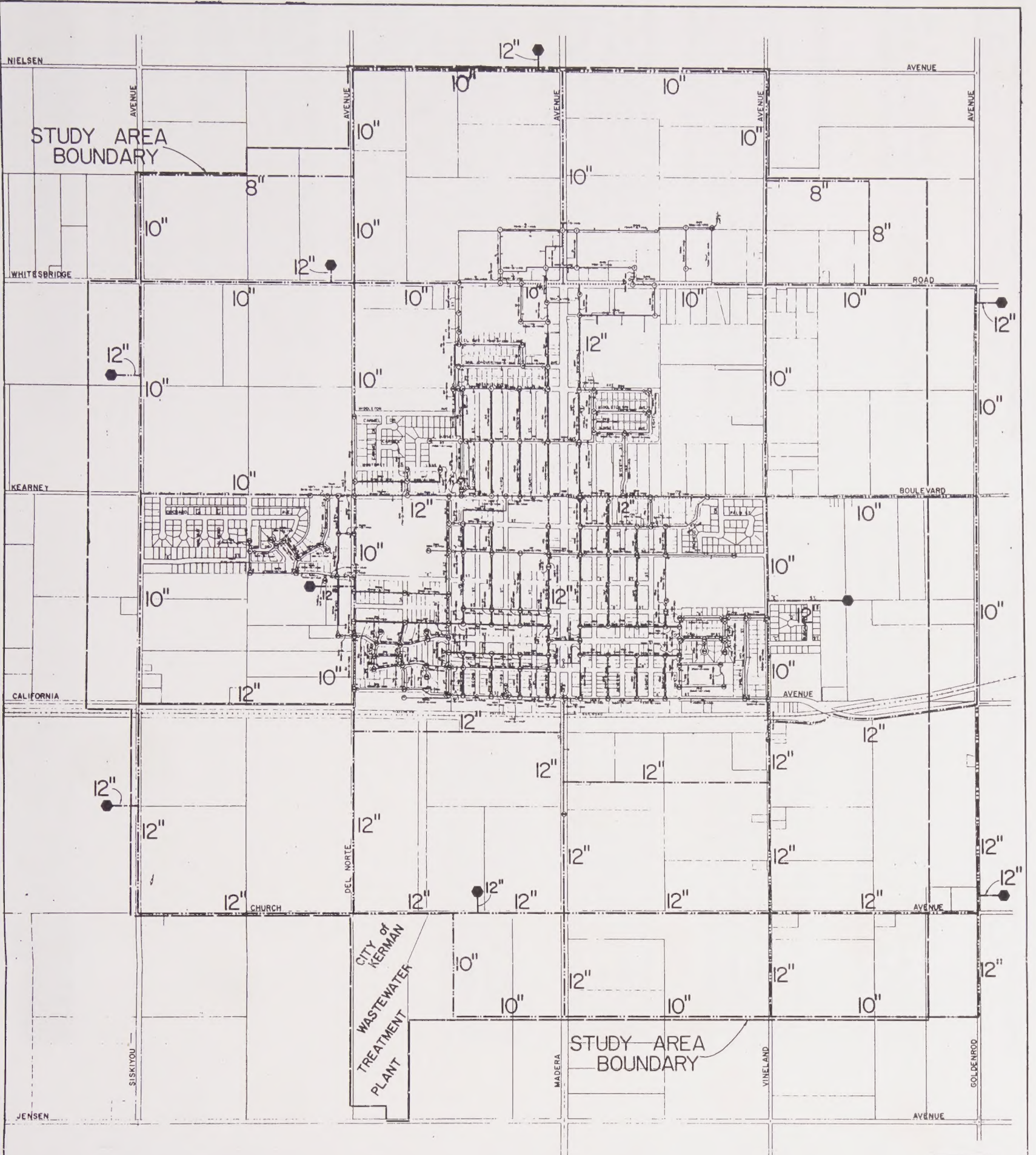
Demand

The current water demand in Kerman ranges from 3.3 million gallons per day or 2,300 gallons per minute during the summer to less than 1.0 million gallons per day or 700 gallons per minute during the winter. Based on an estimated "peaking factor" of 1.8, the hourly peak demand for water reaches nearly 6.0 mgd (4.1 gpm) during the summer, which is approximately 50 percent of the total production capacity of the city's water system.

The major water users in Kerman include the three schools operated by Kerman Unified School District, Save Mart and Food Land grocery stores, and Pacific Coast Packaging. Under the current population of 6,323, the average city-wide water demand rate during the summer is approximately 521 gallons per day per person. The average summer demand per residential unit is approximately 1,683 gallons per day (based on an occupancy rate of 3.23 persons per unit).

Master Plan

The City's existing Water Distribution System Master Plan, which was adopted in 1980 (see Exhibit 6), is based on the projected demand for water that will be required under the 1979 General



LEGEND

- Node Number
- 25' — Pipe Number
- 770-8-140 — Hazen-Williams "C" Value
- Diameter (inches)
- Length (feet)
- Fire Hydrant
- Main Valve
- Existing Well
- Proposed Well
- Existing Water Main
- Existing Water Main to be Upgraded
- Master Plan Arterial Water Main
- Study Area Boundary

SCALE 1" = 400'

CITY OF KERMAN
LONG RANGE WATER MASTER PLAN

EXHIBIT 6

Plan. The Master Plan identified the improvements that would be needed to serve the planned land uses within the area delineated within the 1979 Sphere of Influence.

STORM DRAINAGE SYSTEM

Storm drainage service in Kerman is provided by the City. It is composed of a system of collection, transmission, and disposal facilities. The City's Storm Drainage Master Plan (see Exhibit 7), adopted in 1981, divided the area within Kerman's Sphere of Influence into nine "drainage zones".

The most prominent drainage zone encompasses much of the developed area between Whitesbridge and California. This zone is served by a 30-inch line in First Street that connects to a 42-inch line at California. The 42-inch line extends south to Church Avenue and discharges into an open channel that conveys stormwater to a basin south of the City's Wastewater Treatment Plant.

North of "G" Street, most of the runoff from this drainage zone surface flows along gutters to a drop inlet at Madera and Sunset, which connects with a 24-inch line in Sunset. South of "G" Street, runoff surface flows along gutters to drop inlets in California, which connect to the line in California and the First Street line. Because moderate street flooding can occur at drop inlets when the lines in Sunset and California are overloaded, the Master Plan recommends the installation of parallel lines in these streets.

The other eight designated drainage zones generally serve more recent development and areas that will be developed in the future. Each of these drainage zones have existing or planned stormwater disposal basins. Two of the existing basins also serve as landscaped, recreational facilities, while the remainder of the existing basins are unlandscaped, single-use facilities.

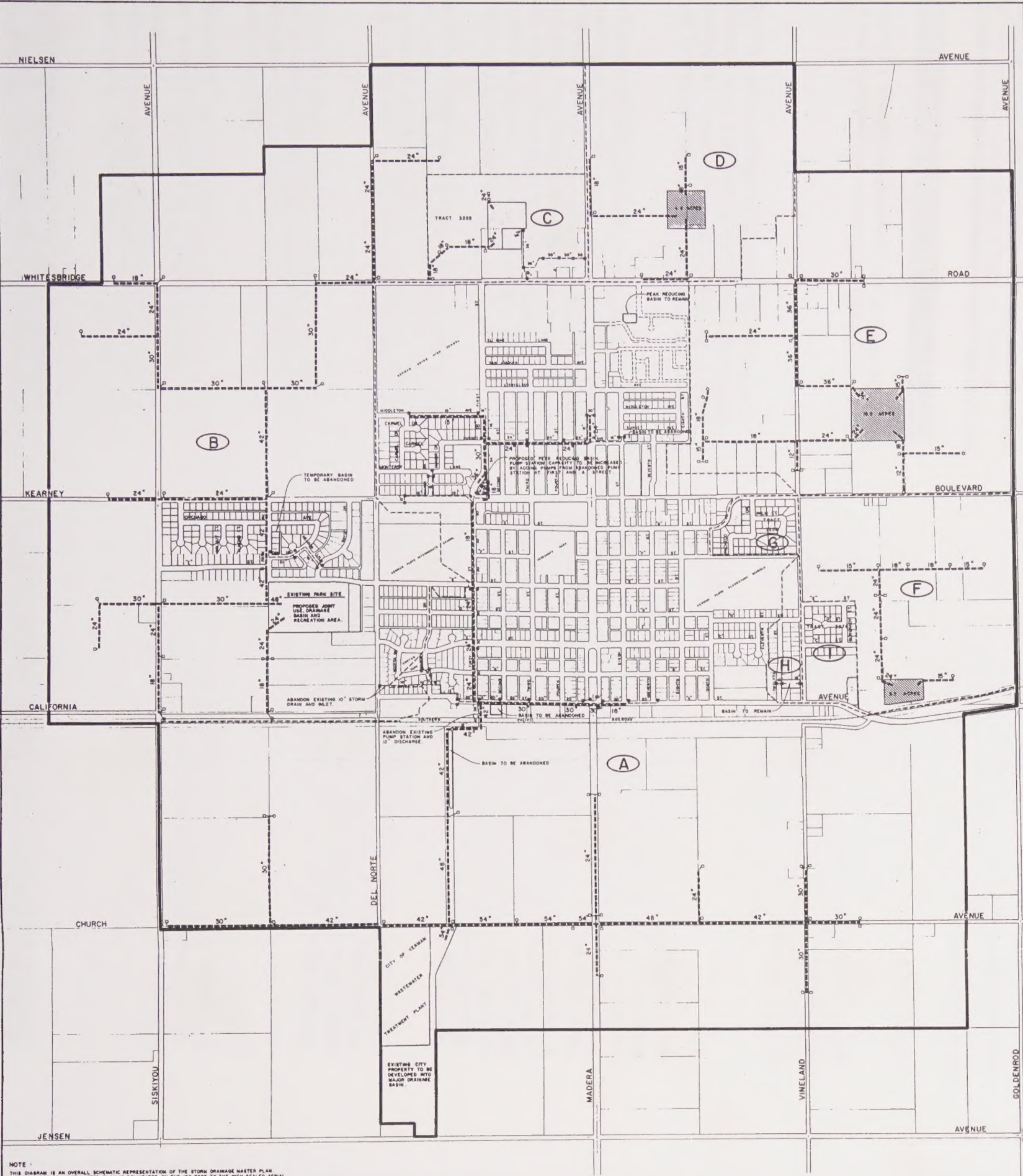
Many of the deficiencies in the existing drainage system that were identified in the Master Plan have been corrected by the City. Master planned lines that were installed by the City to correct

existing deficiencies include parallel lines in Middleton (west of First), First (between Middleton and Kearney), and Madera (north of Sunset). The capacity of the pump station at the "buffer" basin at First and Kearney was increased, and the pump station at First and California was abandoned.

Other master planned facilities have been installed to serve new development, including a 24-inch line in Kearney between Siskiyou and Park and a 42-inch line in Park south of Kearney. These lines serve the residential uses that have developed south of Kearney and west of Del Norte. The 42-inch line discharges into an existing basin south of "E" Street and east of Park.

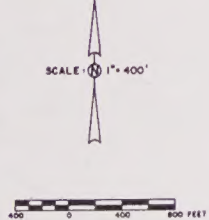
The City also installed a 24-inch line in Madera Avenue north of Church Avenue and a 54-inch line in Church, which connects with the Madera line and drains to the open channel near the City's treatment plant. These lines receive runoff from Madera Avenue and the industrial uses along Madera.

Deficiencies in the existing drainage system that have not been corrected by the City include the lines in Sunset and California, and the 30-inch line in First Street between Kearney and California. The City intends to install new lines parallel to these deficient lines as funds become available.



NOTE:
THIS DIAGRAM IS AN OVERALL SCHEMATIC REPRESENTATION OF THE STORM DRAINAGE MASTER PLAN.
THE COMPLETE DRAINAGE MASTER PLAN IS DELINEATED ON THE 100 FOOT TO THE INCH SCALED AERIAL
TOPOGRAPHIC COMPOSITE STORM DRAINAGE MAPS, SHEETS 1 THROUGH 23, WHICH ARE INCLUDED
AS A PART OF THE STORM DRAINAGE MASTER PLAN REPORT.

CITY OF KERMAN
LONG RANGE STORM DRAINAGE MASTER PLAN



LEGEND	
	LONG RANGE STORM DRAINAGE MASTER PLAN SERVICE AREA BOUNDARY
	MASTER PLANNED STORM DRAINAGE PIPELINE OF SIZE INDICATED
	MASTER PLANNED DRAINAGE COLLECTION POINT
	EXISTING STORM DRAINAGE PIPELINE OF SIZE INDICATED
	EXISTING DRAINAGE COLLECTION POINT
	DRAINAGE AREA DESIGNATION
	DRAINAGE AREA BOUNDARY
	EXISTING DRAINAGE BASIN (STATUS AS INDICATED)
	PROPOSED DRAINAGE BASIN TO BE ACQUIRED
	PERMANENT DRAINAGE BASIN TO BE CREATED AS A PART OF SUBDIVISION DEVELOPMENT

H. CIRCULATION SYSTEM

Kerman is served by a network of collectors, local streets, alleys and two major regional transportation routes: State Routes 180 and 145 (see Exhibit 8).

State Routes

State Route (SR) 180, which is designated as a "Federal Aid Primary" highway by Caltrans, is an east-west roadway that connects with Highway 33 near Mendota and extends east through Kerman and Fresno. East of Fresno, SR 180 continues into Sequoia National Forest.

In and around Kerman, SR 180 is referred to as Whitesbridge Road and is designated as an "arterial" by the City. In a segment that begins 800 feet west of Madera and crosses through the intersection with Madera and extends 2,200 feet east of Madera, Whitesbridge is constructed with two travel lanes in each direction and curb and gutter. Outside of this segment, it is constructed with one travel lane in each direction generally without curb and gutter.

Within Kerman, the roadway has a standard design (curb-to-curb) width of 60 feet within an 80-foot right-of-way. In the vicinity of Kerman, the only control on SR 180 is a four-way flashing red light at the intersection with SR 145. The posted speed limit in the City is 35 mph.

SR 145, which also is a designated "Federal Aid Primary" highway, is a north-south roadway that connects with Interstate 5 near Coalinga and extends north through Kerman and Madera. North of Madera, it connects with SR 41.

In and around Kerman, SR 145 is referred to as Madera Avenue and designated as an "arterial" by the City. From Church Avenue through the intersection with Whitesbridge, the Madera cross-section includes two travel lanes in each direction, parallel parking lanes, and curb and gutter. North of Whitesbridge and south of

Church, Madera is constructed with one travel lane in each direction without curb and gutter.

Within Kerman, the roadway has a standard design (curb-to-curb) width of 76 feet within a 100-foot right-of-way. In Kerman, SR 145 is controlled by a two-phase traffic signal at "E" Street and a four-way flashing red light at SR 180. The posted speed limit in the City is 35 mph north of Kearney and 30 mph south of Kearney.

City Streets

The street system in Kerman consists of a grid in which most of the streets are oriented north and south or east and west. The existing Kerman Circulation Element designates Madera Avenue (SR 145) and Whitesbridge Road (SR 180) as "arterials"; Del Norte, Siskiyou, and Vineland as north-south "collectors" and Church, California, and Kearney as east-west "collectors". The collectors, located at half-mile intervals, are regional roadways that extend beyond Kerman into the surrounding rural lands. Through Kerman, these roadways are striped for one lane travel in each direction. Based on current city improvement standards, collector roadways generally have a design (curb-to-curb) width of 60 feet within an 80 foot right-of-way.

The Circulation Element designates Park, First, and Eighth streets as north-south "local collectors" and, "C" and "E" streets and the Middleton-Stanislaus couplet as east-west "local collectors". These roadways generally are located mid-way between the collector roadways.

Trip Generation

The significant generators of local and regional traffic in Kerman include Pacific Coast Packaging on south Madera, Kerman High School at First and Middleton, and the City offices on Madera between "B" and "C".

Traffic Volumes

Average daily traffic volumes in the vicinity of Kerman were obtained from Caltrans and the Fresno County Public Works Department. These traffic volumes are presented in Table 22 and displayed in Exhibit 9.

Caltrans collected traffic counts on SR 180 (west of SR 145) and SR 145 (north of SR 180) over a period of seven consecutive days in April and June of 1992. The counts indicate that the average weekday daily (two-way) traffic volume on SR 180 was 7,248 vehicles. The highest single day volume of 7,531 vehicles occurred on a Friday.

The weekday peak-hour on SR 180 typically occurred between 11:00 a.m. and noon with an average weekday volume of 446 vehicles. The maximum morning hourly volume of 546 vehicles occurred on a Sunday between 11:00 a.m. and noon. The maximum hourly volume occurred most frequently between 4:00 and 5:00 p.m. with an average of 559 vehicles. The maximum afternoon hourly volume of 587 vehicles occurred on a Sunday between noon and 1:00 p.m.

The average weekday daily (two-way) traffic volume on SR 145 (north of SR 180) was 10,240 vehicles. The highest single day volume of 10,877 vehicles occurred on a Friday. The weekday maximum hourly generally occurred between 11:00 a.m. and noon with an average of 688 vehicles. The maximum morning hourly volume of 718 vehicles occurred on a Tuesday between 11:00 a.m. and noon. The afternoon weekday maximum hourly volume occurred most frequently between 4:00 and 5:00 p.m. with an average of 861 vehicles. The maximum afternoon hourly volume of 932 vehicles occurred on a Friday between 4:00 and 5:00 p.m.

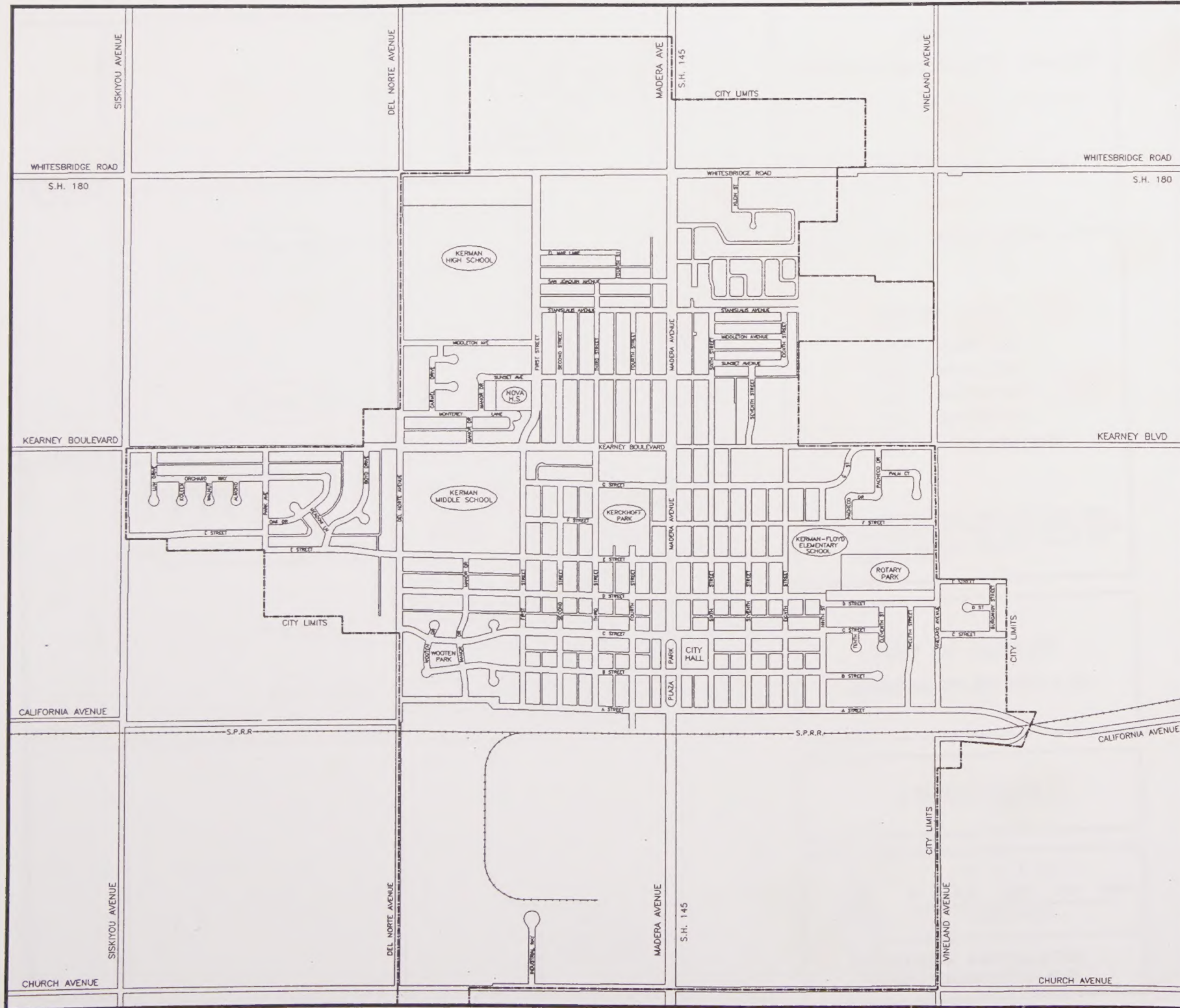
The Fresno County Public Works Department collected traffic counts at several locations around Kerman in 1991, 1992 and 1993. The county's 1991 and 1992 traffic counts have been adjusted, using an annual growth rate of 3.5 percent, to estimate 1993 traffic

volumes. The county's 1993 data indicates that the maximum hourly volumes generally occurred between 7:00 and 9:00 a.m. and between 4:00 and 7:00 p.m., with the afternoon volumes being the highest.

TABLE 22
PROJECT AREA AVERAGE DAILY TRAFFIC VOLUMES

Street	Location	Direction	Daily Volume	1993 Volume(1)
Madera	s/o Belmont	nb	4,433 ('91)	4,703
	n/o Belmont	sb	4,126 ('91)	4,420
	n/o Whitesbridge	both	10,240* ('92)	10,598
	s/o Whitesbridge	both	16,800 ('91)	18,034
Vineland	n/o Kearney	both	1,234 ('93)	1,234
	s/o Kearney	both	2,006 ('93)	2,006
Del Norte	s/o Whitesbridge	both	1,184 ('91)	1,268
	n/o California	both	396 ('91)	424
	n/o Kearney	both	1,533 ('93)	1,533
	s/o Kearney	both	1,111 ('93)	1,133
Whitesbridge	w/o Madera	both	7,248* ('92)	7,502
"E" Street	w/o Madera	both	2,155 ('93)	2,155
	e/o Madera	both	1,209 ('93)	1,209
Church	w/o Madera	both	171 ('91)	183
California	w/o Goldenrod	both	1,808 ('91)	1,937
Kearney	w/o Vineland	ef	1,361 ('92)	1,409
	e/o Vineland	wb	798 ('92)	826
	w/o Madera	both	2,658 ('93)	2,658
	e/o Madera	both	2,858 ('93)	2,858
Jensen	w/o Madera	both	1,528 ('92)	1,581

(1) Reported volumes adjusted to 1993 volumes based on an annual growth rate of 3.5 percent. * Source: Caltrans. All other volumes obtained from Fresno County Public Works Department.



EXISTING STREET SYSTEM

CITY OF KERMAN GENERAL PLAN UPDATE

EXHIBIT NO. 8



1" = 1,320'
0 500 1000 1500 2000
SCALE IN FEET

COLLINS & ASSOCIATES
PLANNING CONSULTANTS

EXISTING
STREET SYSTEM

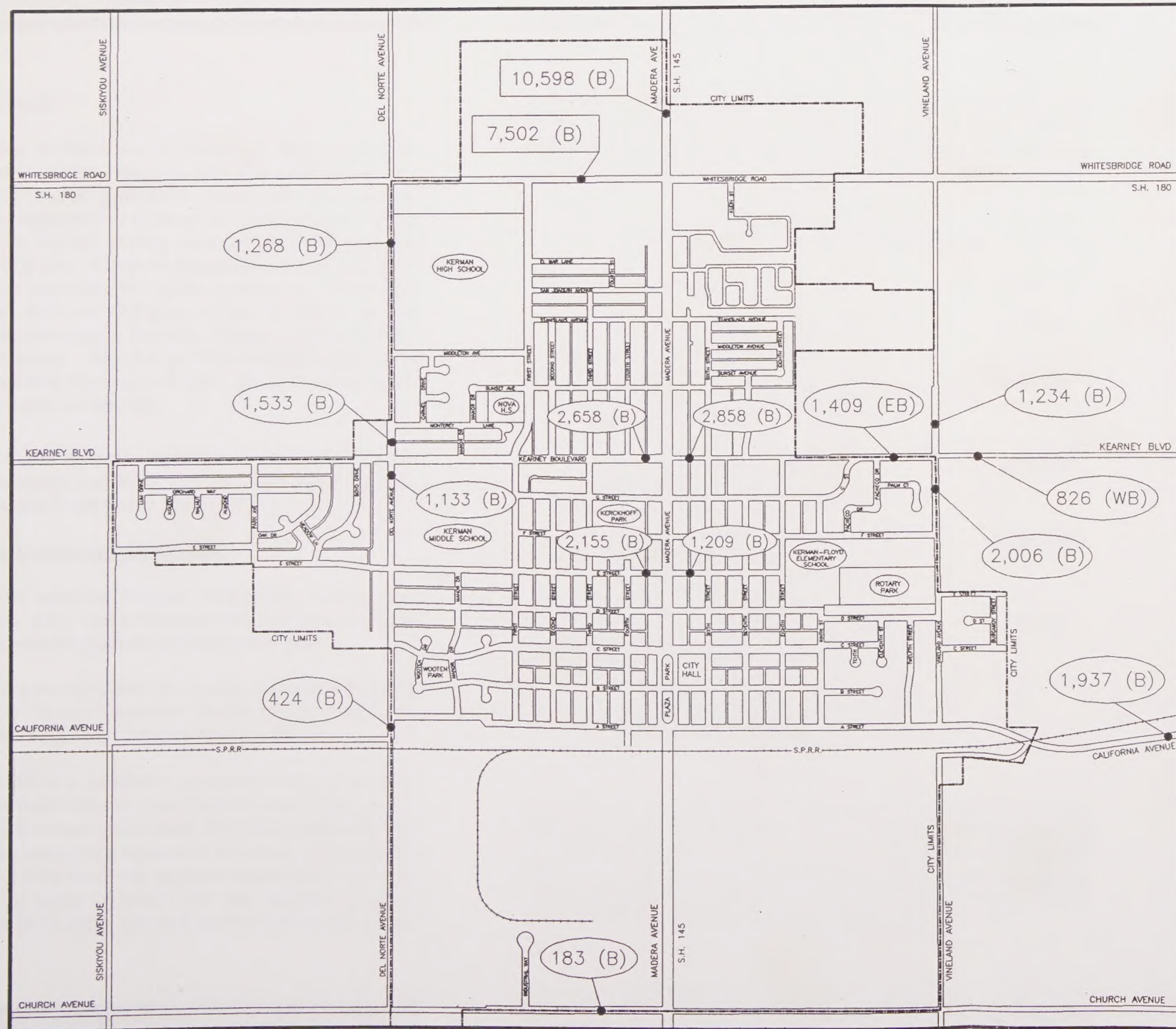
CITY OF KERMAN
GENERAL PLAN UPDATE

EXHIBIT NO. 8



1" = 1,320'
0 500 1000 1500 2000
SCALE IN FEET

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EXISTING AVERAGE DAILY TRAFFIC VOLUMES

7,502 (B) SOURCE: CALTRANS

1,268 (B) SOURCE: FRESNO COUNTY

DIRECTION

(EB) EASTBOUND
(WB) WESTBOUND
(NB) NORTHBOUND
(SB) SOUTHBOUND
(B) BOTH DIRECTIONS

NOTE: REPORTED 1991 AND 1992 VOLUMES
ADJUSTED TO 1993 VOLUMES BASED
ON AN ANNUAL GROWTH RATE OF
3.5 PERCENT

CITY OF KERMAN GENERAL PLAN UPDATE

EXHIBIT NO. 9



1" = 1,320'
0 500 1000 1500 2000
SCALE IN FEET

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Peak-Hour Movements

The analysis of key intersections in Kerman's street network is based on peak-hour traffic volumes. For this analysis, it was necessary to establish when peak-hour traffic volumes occurred. The traffic volumes reported by Caltrans for State Routes 145 and 180 indicate that the highest hourly volumes generally occurred between 4:00 and 6:00 p.m. Based on this pattern of use, afternoon peak-hour vehicle movements were counted in 15-minute increments between 4:30 and 6:00 p.m. in May of 1993 at the two highest-volume intersections in Kerman: Madera at Whitesbridge and Madera at Kearney. Madera at Whitesbridge currently is controlled by a four-way flashing red light; Madera at Kearney is controlled by stop signs on Kearney.

Based on a review of traffic counts at the above intersections, peak-hour vehicle movements occurred between 4:30 and 5:30 p.m.. Peak-hour volumes are displayed in Exhibit 10.

Analysis of Existing Operation Conditions

An analysis of the existing Kerman circulation system was conducted using the daily traffic volumes obtained from Caltrans and Fresno County and the peak-hour intersection counts.

The daily traffic volumes were used to evaluate the segments of key streets based on a "level-of-service" performance criteria, as described in the 1985 Highway Capacity Manual (HCM).

Level-of-service (LOS) is a qualitative measure of the operational conditions within a traffic stream. Six levels of service, each with a letter designation, have been established. LOS A represents the best operating conditions and LOS F represents the worst. A description of the levels of service for roadway segments (with traffic flow that is uninterrupted by traffic controls) and the defining range of volume-to-capacity (v/c) ratios for each service level are presented in Table 23.

The ultimate capacity of a roadway segment is reached when the v/c ratio reaches 1.0 (at the threshold from LOS E to LOS F). Generally, an LOS of "C" or better corresponds to operating conditions that are considered acceptable by most drivers.

TABLE 23
LEVEL OF SERVICE INTERPRETATION

LOS	DESCRIPTION	V/C
A	Free flow, low volume, high operating speed, high maneuverability.	0.00-0.59
B	Stable flow, moderate volume, speed somewhat restricted by traffic conditions, high maneuverability.	0.60-0.69
C	Stable flow, high volume, speed and maneuverability determined by traffic conditions.	0.70-0.79
D	Unstable flow, high volumes, tolerable but fluctuating operating speed and maneuverability.	0.80-0.89
E	Unstable flow, high volumes approaching roadway capacity, limited speed, intermittent vehicle queuing.	0.90-0.99
F	Forced flow, volumes lower than capacity above due to very low speeds; heavy queuing of vehicles, frequent stoppages.	1.0

The v/c ratios and corresponding service levels of Kerman's major streets are presented in Table 25. The current service level ratings indicate that these roadways are generally operating at LOS A with traffic volumes that are well below their ultimate capacities. Notable exceptions include the two-lane sections of Madera (north of Whitesbridge) and Whitesbridge (west of Madera).

Madera north of Whitesbridge, it is assumed that the reported daily volumes on Madera north of Whitesbridge can be applied both to the two-lane and four-lane sections. As shown in Table 25, the four-lane section is operating at LOS A, while the two-lane section is operating at LOS D. Similarly, because a transition from two-lanes to four-lanes occurs on Whitesbridge west of Madera, it is assumed that the reported daily volumes on Whitesbridge west of Madera can be applied both to the two-lane and four-lane sections. The four-lane section is operating at LOS A; the two-lane section at LOS B.

TABLE 24
SEGMENT CAPACITIES

Roadway Classification	<u>LOS A</u>	<u>LOS C</u>	<u>LOS E</u>
<u>Arterial</u>			
2-lane undivided	7,200	9,600	12,000
4-lane undivided	14,400	19,200	24,000
<u>Collector</u>			
2-lane undivided	5,400	7,200	9,000
4-lane undivided	10,800	14,400	18,000

Source: Collins & Associates, 1993

Intersection Analysis

A "Level of Service" (LOS) analysis was performed with the existing peak-hour traffic counts at Kerman's two major intersections. For the Madera at Kearney intersection, which is controlled with a two-way stop, the analysis was performed with the Highway Capacity Software (HCS) "Unsignalized Intersections" module, which is based on Chapter 10 of the Highway Capacity Manual.

The HCS computational procedure assumes that traffic on the major, uncontrolled street is not affected by movements from the minor, controlled street. It is assumed that left turns from the major

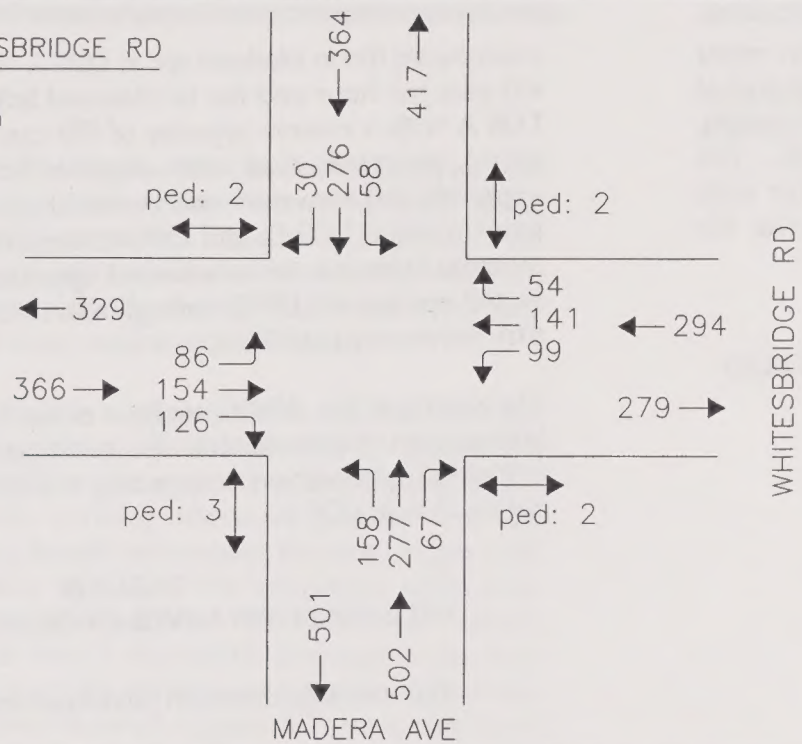
TABLE 25
SEGMENT LEVEL OF SERVICE ANALYSIS

Street	Lanes	Daily Type(1)	Daily Volume(2)	Capacity(3)	V/C	LOS
Madera						
n/o Whitesbridge	4	A	10,598	24,000	0.44	A
n/o Whitesbridge(4)	2	A	10,598	12,000	0.88	D
Vineland						
n/o Kearney	2	C	1,234	9,000	0.14	A
s/o Kearney	2	C	2,006	9,000	0.22	A
Del Norte						
s/o Whitesbridge2		C	1,268	9,000	0.14	A
n/o Kearney	2	C	1,533	9,000	0.17	A
n/o California	2	C	424	9,000	0.05	A
s/o Kearney	2	C	1,133	9,000	0.13	A
Whitesbridge						
w/o Madera	4	A	7,502	24,000	0.31	A
w/o Madera(5)	2	A	7,502	12,000	0.62	B
E Street						
w/o Madera	2	C	2,155	9,000	0.24	A
e/o Madera	2	C	1,209	9,000	0.13	A
Church						
w/o Madera	2	C	183	9,000	0.02	A
California						
w/o Goldenrod	2	C	1,937	9,000	0.22	A
Kearney						
w/o Madera	2	C	2,658	9,000	0.3	A
e/o Madera	2	C	2,858	9,000	0.32	A
Jensen						
w/o Madera	2	C	1,581	9,000	0.18	A

- (1) A: Arterial; C: Collector
- (2) 1993 average volumes obtained from either 1993 field counts or adjusted 1991/1992 volumes.
- (3) Ultimate capacity.
- (4) The number of lanes changes from two to four immediately north of Whitesbridge. It is assumed that the daily volume can be applied both to the two-lane and four-lane sections.
- (5) The number of lanes changes from two to four west of Madera. It is assumed that the daily volume can be applied both to the two-lane and four-lane sections.

MADERA AVE @ WHITESBRIDGE RD

(COUNTED ON 5-5-93)



EXISTING
AFTERNOON PEAK-HOUR
TRAFFIC VOLUMES
(4:30-5:30 P.M.)

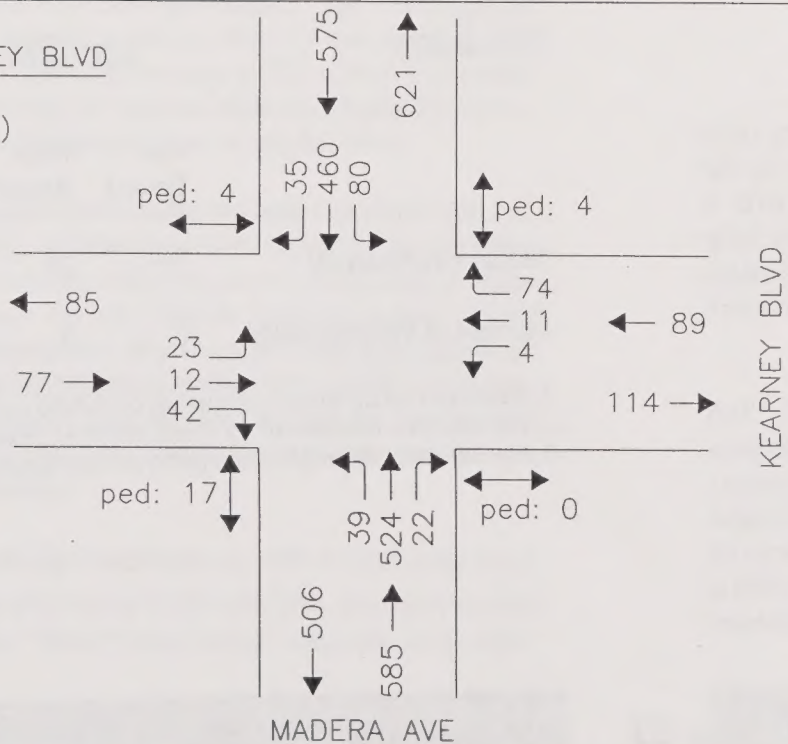
CITY OF KERMAN
GENERAL PLAN UPDATE

EXHIBIT NO. 10

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MADERA AVE @ KEARNEY BLVD

(COUNTED ON 5-11-93)



NO SCALE

street are affected by the opposing major street flow and that minor street traffic is affected by all conflicting movements. The size of gaps in the major street traffic are based on the type of movement, major street speed, and number of major street lanes. The computations establish a "reserve capacity" and LOS for each intersection approach. The HCM level-of-service criteria for unsignalized intersections is presented in Table 26

TABLE 26
HCM LEVEL-OF -SERVICE CRITERIA OF UNSIGNALIZED INTERSECTIONS

Reserve Capacity	Level of Service	Delay to Minor Street Traffic
>400 cars per hour	A	Little or no delay
300-399	B	Short delays
200-299	C	Average delays
100-199	D	Long delays
0-99	E	Very long delays
*	F	Severe congestion

* Demand exceeds capacity

Because the Highway Capacity Manual currently provides only guidelines for evaluating all-way stop, controlled intersections, the Madera at Whitesbridge intersection, which is controlled with a four-way flashing red light, was analyzed using the "All-Way Stop Control" (AWSC) model, a spreadsheet template that automates interim procedures to calculate capacity and LOS at all-way stop, controlled intersections.

The findings of the LOS analysis are presented in Table 27. The results of the HCM analysis of the Madera at Kearney intersection indicates that with left-turn, through, and right-turn movements using a shared lane on the Kearney approaches, the eastbound approach currently is operating at LOS D with a reserve capacity of 116 cars per hour, while the westbound approach is at LOS B with a reserve capacity of 322 cars per hour. The southbound left-turn

movements (from Madera) are at LOS A with a reserve capacity of 491 cars per hour and the northbound left-turn movements are at LOS A with a reserve capacity of 573 cars per hour. It should be noted, however, that with separate lanes on the eastbound approach, left-turn movements would operate at LOS E, through movements at LOS D, and right-turn movements at LOS A. With separate lanes on the westbound approach, left-turn movements would operate at LOS E, through movements at LOS D, and right-turn movements at LOS A.

The results of the AWSC analysis of the Madera at Whitesbridge intersection indicates that the northbound, southbound, and eastbound approaches are operating at LOS C, while the westbound approach is at LOS B.

TABLE 27
INTERSECTION LEVEL-OF-SERVICE ANALYSIS

(for existing afternoon peak-hour traffic volumes¹)

Intersection	Peak Hour LOS			
	East Bound	West Bound	North Bound	South Bound
Madera at Kearney	D ³	B ³	A ²	A ²
Madera at Whitesbridge	C	B	C	C

1 Afternoon peak-hour assumed to be 4:30 to 5:30 p.m.

2 For left-turn movement on major street approach.

3 For left-turn, through, and right-turn movements sharing a lane.

Traffic Signal Warrants

The potential need for traffic signals at the Madera at Kearney and Madera and Whitesbridge intersections were evaluated using "Traffic Signal Warrants" presented in Chapter 9 of the Caltrans Traffic Manual. These warrants are based on criteria that considers minimum vehicle volumes on the "major" and "minor" streets, minimum pedestrian volumes, and accident history.

Several of the warrants require minimum traffic volumes for eight hours within a 24-hour period. Although hourly directional volumes were not obtained on the approaches to the Madera and Kearney intersection, the existing afternoon peak-hour traffic volumes and the two-way hourly volumes on Kearney suggest that the intersection volumes approach the minimum eight-hour volume requirements of two warrants. The "Minimum Vehicle Volume" warrant requires that: 1) the two Madera approaches have a total minimum volume of 500 vehicles per hour for eight hours and 2) the higher volume Kearney approach have a minimum volume of 150 vehicles per hour for eight hours. The "Interruption of Continuous Traffic" warrant requires that: 1) the two Madera approaches have a total minimum volume of 750 vehicles per hour for eight hours and 2) the higher volume Kearney approach have a minimum volume of 75 vehicles per hour for eight hours.

The existing afternoon peak-hour traffic volumes indicate that the Madera and Whitesbridge intersection also currently approaches the "Peak-Hour Delay" warrant, which requires a minimum volume of 100 vehicles per hour on the higher volume minor street approach and a total minimum volume on all four approaches of 800 vehicles per hour. As mentioned earlier, the higher peak-hour volume minor street approach was 89 vehicles (on the westbound Kearney approach), while the total peak-hour volume on all four approaches was 1,326 vehicles.

The Madera and Whitesbridge intersection, with a total peak-hour volume (on all four approaches) of 1,526 vehicles, currently meets the requirements of the "Peak-Hour-Delay" warrant and other

volume-based warrants. City staff has indicated that Caltrans is planning to install a traffic signal at this intersection within a year.

CHAPTER 2

PHYSICAL ENVIRONMENT

CHAPTER 2 • PHYSICAL ENVIRONMENT

A. CLIMATE

The climate of the Kerman area is described as Mediterranean, which is typified by hot, dry summers and mild winters. Temperatures recorded at Lemoore Naval Air Station (LNAS), located 20 miles south of Kerman, show the mean monthly high temperature for July to be 80.6 F, while the mean temperature for January is 45.1 F. It is not uncommon for maximum temperatures to exceed 100 degrees during the summer months; nor for temperatures to drop below freezing in the winter. The highest temperature ever recorded at LNAS was 113 in July of 1975. The lowest temperature of record was 14 in January of 1962.

During the summer, a high pressure ridge develops over the Sierra Nevada blocking the penetration of moist air from the Pacific. This high pressure system tends to weaken during the winter months thereby opening the door to Pacific storms. Approximately 90 percent of all rainfall in Kerman occurs between November and April. Average rainfall measured in Kerman is 6.08 inches per year compared to 7.83 inches at Coalinga, 7.64 inches at Lemoore, and 9.5 inches in Fresno.

Air movement through the San Joaquin Valley is in a southeasterly direction. Wind enters the Valley over the passes east of the San Francisco Bay and exits through mountain passes at the southern end of the San Joaquin Valley, principally Tehachapi. Meteorological data from LNAS indicates that the average wind speed is 4-6 knots with maximum gusts 40-50 knots recorded from

October to May. Wind direction records measured between 1967 and 1971, indicate that winds blew out of the northwest quadrant 64 percent of the time. The prevailing wind direction is from the north and north-northwest, except in December and January, when the winds blow from the southeast or east-southeast.

TABLE 28
SUMMARY OF WEATHER DATA AT LEMOORE NAS

Month	Temperature				Precipitation		Wind	
	Ave. Max.	Ave. Min.	Ave.	Extreme	Rainfall	Days w/ Precip.	Prevailing Direction	Ave. Speed
January	54.5	35.7	45.1	78/14	1.3	6	SE	3.8
February	62.5	39.4	51.0	82/21	1.5	7	N	6.1
March	67.6	40.7	54.2	90/22	1.2	7	NNW	5.1
April	74.7	43.6	59.1	102/30	0.6	4	NNW	5.8
May	85.1	51.0	68.1	109/34	0.2	2	NNW	6.3
June	93.0	58.0	75.0	112/52	0.4	1	NNW	6.0
July	99.0	62.1	80.6	113/47	0.1	0	NNW	5.8
August	96.9	61.6	79.3	112/48	0.0	0	NNW	5.2
Sept	90.6	56.6	73.6	107/41	0.3	1	N	4.9
October	80.5	48.0	64.5	104/24	0.3	2	NNW	4.4
November	66.0	40.0	53.0	87/22	0.9	6	NNW	3.5
December	53.8	35.3	44.6	80/18	0.9	7	ESE	3.4
Totals	77.0	47.7	62.3		7.6 in.	43		5.0 knot

Source: Naval Oceanography Command, Lemoore

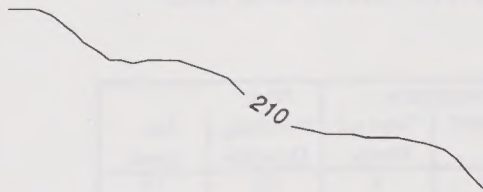
B. TOPOGRAPHY

The Kerman planning area is located on topography that is relatively level, falling from the northeast towards the southwest. Kerman's elevations range from approximately 225' above Mean Sea Level (MSL) near the intersection of Whitesbridge Road and Goldenrod Avenue to 210' MSL at the intersection of Siskiyou Avenue and Church Avenue (see Exhibit 11).

EXHIBIT 11

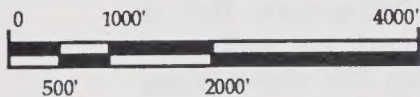
Topography

LINES OF EQUAL ALTITUDE



Base Map: Portion of Northeast quarter of the Kerman 15' Quadrangle published by United States Geologic Survey, 1963, revised 1981.

Kerman General Plan

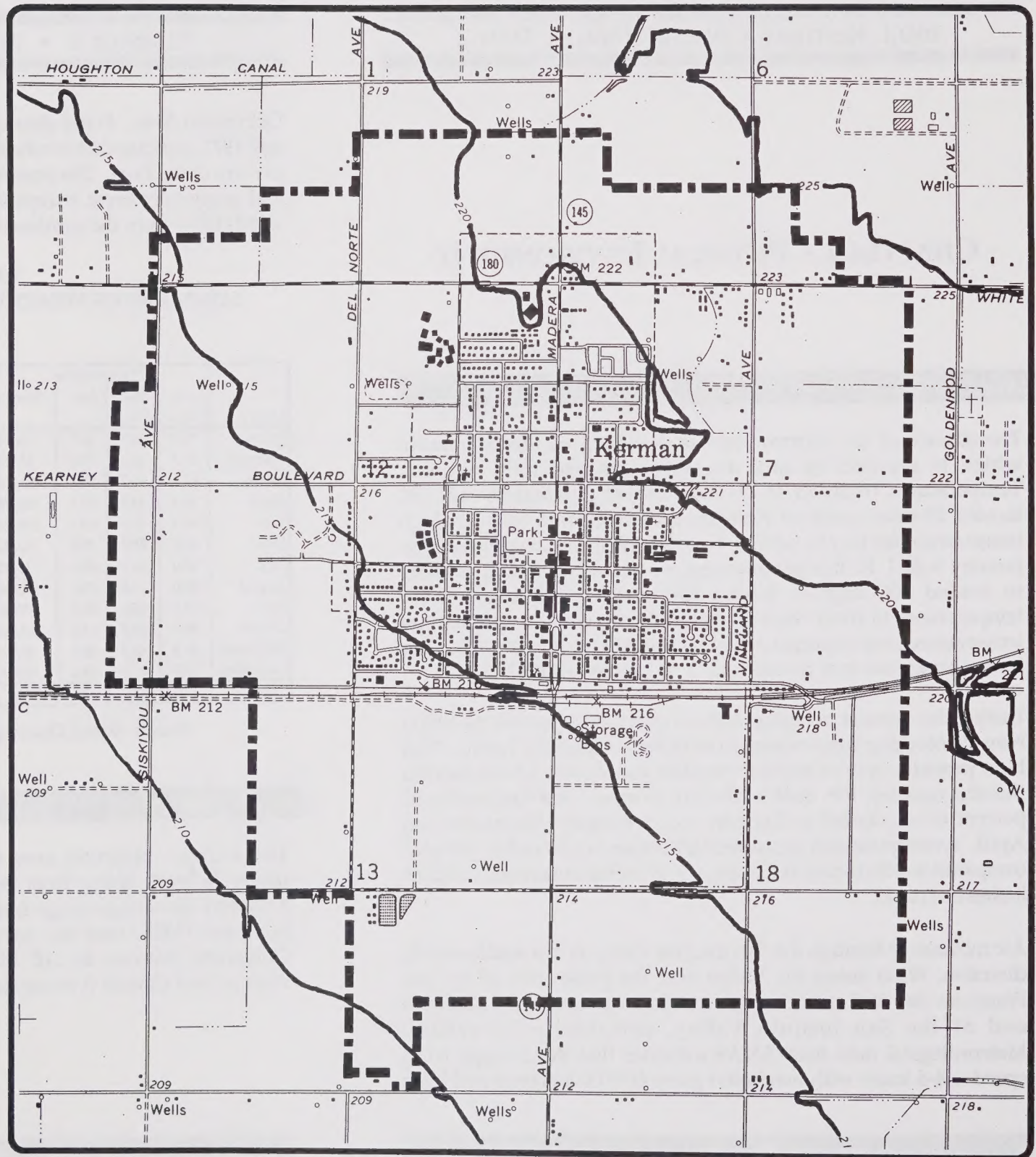


1 inch = 2,000 feet

--- PLANNING AREA
BOUNDARY



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C. SOILS

The soils in the Kerman area are described by the Soil Survey of Eastern Fresno County, prepared by the Soil Conservation Service, Department of Agriculture (see Exhibit No. 12). The general soil map of this Survey shows three major soil groups in Kerman: the Hanford, Hesperia and Traver Series. The Hanford series consists of soils that are well-drained, fertile, moderately coarse textured, and are derived from recent granitic alluvium. The Hanford soils are generally located on nearly level alluvial fans.

The Hesperia series consists of soils that are well-drained, moderately textured and are formed from granitic alluvium. Some of the soils in this series are saline-alkaline affected. They are generally found on alluvial fans.

The Traver series consists of soils that are well-drained that are typically saline-alkali affected. These soils are deep to moderately deep over compact silt. This series occupies young alluvial fans of the San Joaquin and Kings Rivers.

The Eastern Fresno County Soil Survey identifies seven specific soils in the planning area. They are Hanford coarse sandy loam (Ha); Hesperia sandy loam, moderately deep (Hsm); Hanford sandy loam (Hc); Hesperia sandy loam, moderately deep, saline-alkaline (Hsn); Traver sandy loam, moderately deep (Ts); Tujunga loamy sand (Tzba); and Hesperia sandy loam, shallow (Hso).

Hanford coarse sandy loam (Ha) is a very deep soil that is well drained and is located on alluvial fans. This soil has a Class II agricultural rating (Class I soils have the fewest limitations for agriculture; Class VIII have the most limitations for agriculture) and a Storie Index rating of 80 (A Storie Index rating of 80-100 has the greatest suitability for intensive agriculture; less than 10 has the least suitability). Limitations for urban development are moderate foundation support.

Hesperia sandy loam, moderately deep (Hsm) is a moderately deep soil that is well drained and is located on the central parts of the

young fans of the Kings and San Joaquin Rivers. Under natural conditions these soils were subject to seasonal flooding and a fluctuating high water table. It has a Class II agricultural rating and a Storie Index of 90. Limitations for urban development are moderately slow permeability, moderate to severe foundation support, and moderately slow substratum permeability.

Hanford sandy loam (Hc) is a very deep soil that is well drained and is located on alluvial fans. This soil has a Class II agricultural rating and a Storie Index rating of 95. Limitations for urban development are moderate foundation support.

Hesperia sandy loam, moderately deep, saline-alkaline (Hsn) is a moderately deep soil that is well drained and is located on the central parts of the young fans of the Kings and San Joaquin Rivers. The underlying material is strongly alkaline and normally is slightly saline from accumulations of salts. It has a Class III agricultural rating and a Storie Index of 50. Limitations for urban development are moderately slow permeability, moderate to severe foundation support, and moderately slow substratum permeability.

Traver sandy loam, moderately deep (Ts) is a well-drained soil that is saline-alkaline affected. Over long periods of time, sodium salts were accumulated in the soil material. It has a Class II agricultural rating and a Storie Index of 34. Limitations for urban development are moderate to severe saline-alkaline affected, high conductivity, and moderate soil pressure.

Tujunga loamy sand (Tzba) consists of excessively drained loamy sand and sandy soils that were formed in recent alluvium derived from granitic rocks. These soils normally occupy flood plains and fans of rivers and smaller streams. The material below the surface layer is mainly loamy sand to a depth of 5 feet or more, but in many places it is stratified with sand, coarse sand, or loamy coarse sand. It has a Class III agricultural rating and a Storie Index of 76. Limitations for urban development are severe for foundation support and severe for soil pressure.

Hesperia sandy loam, shallow (Hso) consists of well-drained

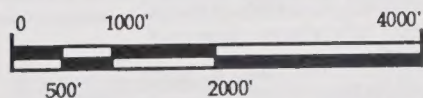
EXHIBIT 12

Soils

1. Hanford course sandy loam
2. Hanford sandy loam
3. Hanford sandy loam, silty substratum
4. Hesperia course sandy loam
5. Hesperia sandy loam, moderately deep
6. Hesperia sandy loam, moderately deep, saline-alkali
7. Hesperia sandy loam, shallow
8. Hesperia sandy loam, shallow, saline-alkali
9. Traver sandy loam, moderately deep
10. Tujunga loamy sand, 0 - 3 percent slopes

Base Map: Portion of Northeast quarter of the Kerman 15' Quadrangle published by United States Geologic Survey, 1963, revised 1981.

Kerman General Plan



--- PLANNING AREA
BOUNDARY

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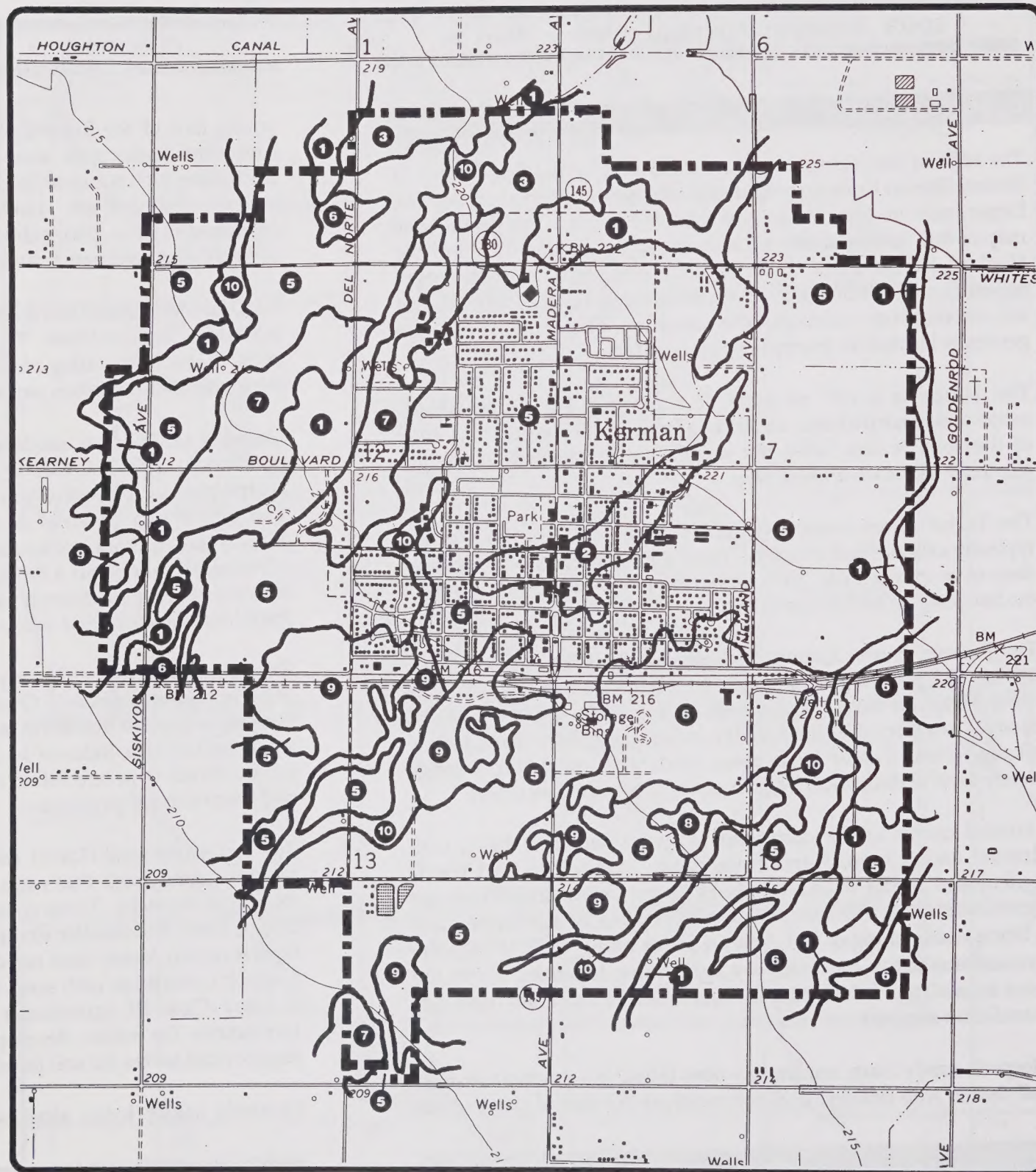


TABLE 29
DEVELOPMENT POTENTIAL OF SOILS

Soil Type	Shrink/Swell	Streets	Parks	Irrigation	Water Retention	Landscaping
Hanford course sandy loam	low	favorable	moderate	mod. to high water-holding	high seepage	slight
Hesperia sandy loam, mod. deep	low	favorable	moderate	low to high water-holding	moderate	moderate
Hanford sandy loam	low	favorable	slight	mod. to high water-holding	high seepage	slight
Hesperia sandy loam, mod. deep, sal-alk	low	favorable	moderate	low to high water-holding	moderate	moderate
Traver sandy loam, mod. deep	low to mod.	favorable	moderate	mod. water-holding	mod. seepage	mod. to severe
Tujunga loamy sand	low	favorable	moderate	low to very low water-holding	high seepage	severe
Hesperia sandy loam, shallow	low	favorable	slight	low to high water-holding	mod. to high	moderate

moderately course textured soils that formed in granitic alluvium. The soil is underlain by a compact, silty layer that ranges in depth of 2.5 to 3 feet. It has a Class III agricultural rating and a Storie Index of 77. Limitations for urban development are severe for septic tanks and moderate for soil pressure.

TABLE 30
PHYSICAL PROPERTIES OF SOILS

Soil Type	Permeability in/hr	Available H2O Capacity in/in	Shrink/Swell Potential
Hanford course sandy loam	2.5-5.0	.10-.12	low
Hesperia sandy loam, mod. deep	2.5-5.0	.12-.14	low
Hanford sandy loam	2.5-5.0	.10-.15	low
Hesperia sandy loam, mod. deep, sal-alk	2.5-5.0	.12-.14	low
Traver sandy loam, mod. deep	2.5-5.0	.08-.1	low
Tujunga loamy sand	5.0-10.0	.06-.08	low
Hesperia sandy loam, shallow	2.5-5.0	.12-.14	low

Source: USGS, Soil Conservation Service

D. GEOLOGY

Kerman is located near the center of the Great Valley of California, a nearly flat northwest-southeast trending basin approximately 450 miles long by 50 miles wide. The basin is bordered by Mesozoic platonic, volcanic, and metamorphic rocks of the Sierra Nevada mountains on the east and by Mesozoic and Cenozoic metamorphic and sedimentary rocks of the Coast Ranges on the west.

The geology of the Kerman area is created by the low alluvial fans of the perennial San Joaquin and Kings Rivers and four ephemeral streams which form the Fresno alluvial fan sequence. The Pleistocene formations which make up the Fresno fan sequence are the Modesto, Riverbank, and Turlock formations.

The Modesto formation occupies the highest stratigraphic position, and is characterized by westward thickening floodplain deposits of recent origin. The sediments within the Modesto formation range in grain size from clay to gravel and seldom exhibit well developed

sedimentary structures.

The Riverbank formation underlies the Modesto formation, but does not differ greatly in lithology or texture. It is characterized by the occurrence of a laterally extensive caliche hardpan member and is often referred to as a terrace deposit.

The Turlock formation contains the majority of the hydrologically important subsurface deposits in the Kerman area. It is comprised of sediments that are moderately to well sorted and homogeneous in composition and grain size. Coarse materials such as sand and gravel form layers known as aquifers which yield large quantities of groundwater, while clay and silt layers form aquitards which divide the stratigraphic section into a number of confined and semi-confined aquifers.

Six, well-defined clay layers (designated "A" through "F"), underlie the central part of the San Joaquin Valley. The Corcoran clay layer (clay layer "E") is the most well known and extensive of these layers. It underlies the Kerman area at a depth of approximately 500 to 600 feet. Many of the wells drilled in the Kerman area are designed to draw water from beneath the Corcoran clay layer due to better water quality and specific yields.

E. WATER

The 1991 Water Supply Report published by the United States Bureau of Reclamation indicates the depth to groundwater in the vicinity of Kerman ranged from 80 to 100 feet in the spring of 1992. Contour lines of equal elevation of groundwater indicate the water table generally falls to the southwest on a gradient of 20 feet per mile (see Exhibit No. 13).

Groundwater is the only source of drinking water in the City of Kerman. Water moving down gradient from the floodplains of Sierra Nevada streams and rivers is the major source of groundwater recharge in this area. Over-application of imported irrigation water within the Fresno Irrigation District is another

source of groundwater recharge. Rainfall in the Kerman area is 8-9 inches annually and provides only a minor percentage of total groundwater recharge in the area.

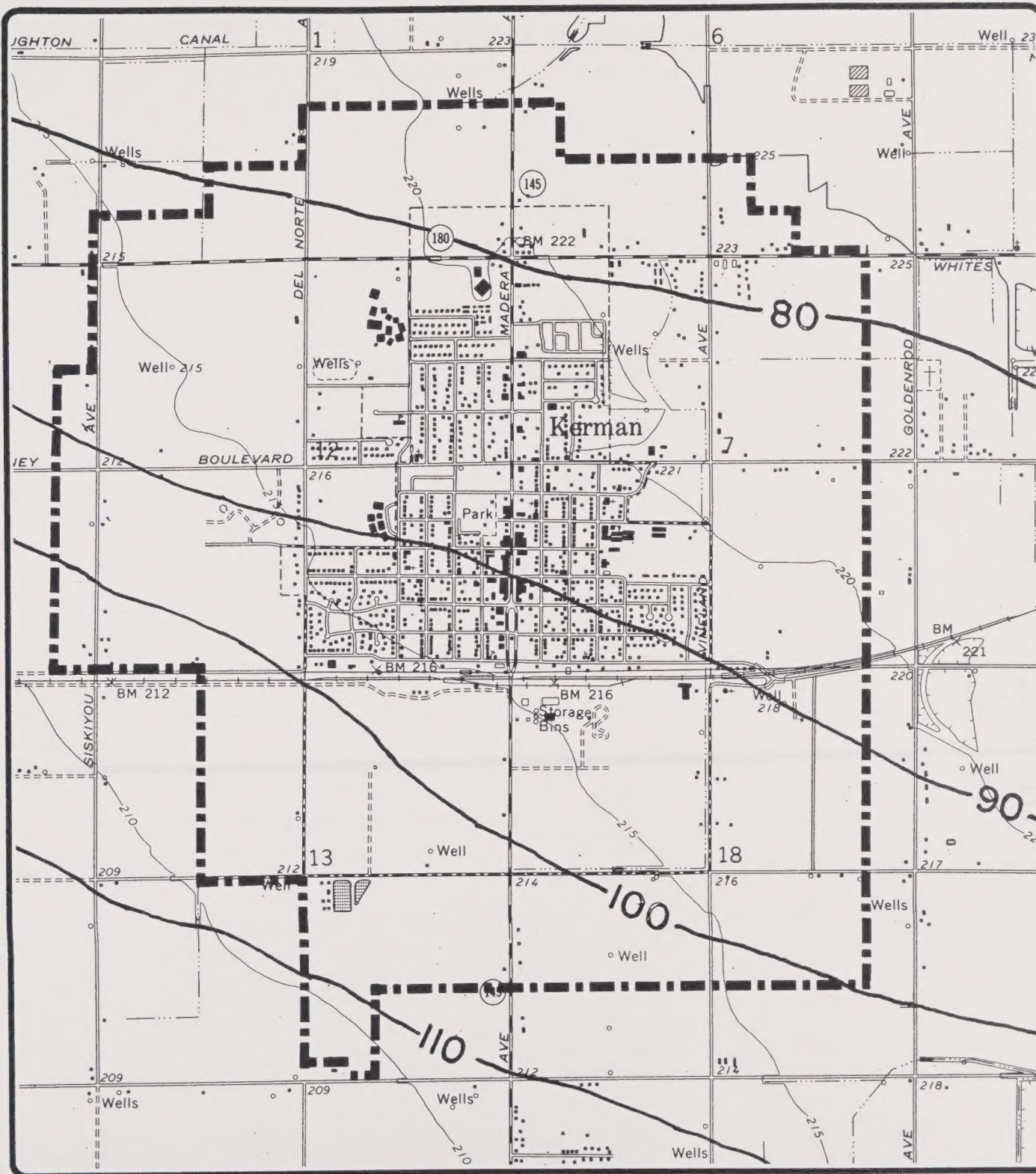
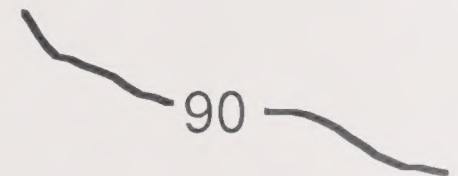


EXHIBIT 13

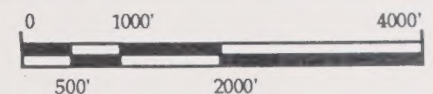
Depth to Groundwater



Example: Depth to groundwater - 90 feet

Base Map: Portion of Northeast quarter of the Kerman 15' Quadrangle published by United States Geologic Survey, 1963, revised 1981.

Kerman General Plan



1 inch = 2,000 feet

--- PLANNING AREA
--- BOUNDARY



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CHAPTER 3

RESOURCES

CHAPTER 3 • RESOURCES

A. SCENIC RESOURCES

The scenic qualities of a community are composed of a mixture of natural and man-made features. The value or importance of these features to the public is dependent upon the visual quality of the view. The rating of a view is a subjective process, however, the U.S. Forest Service has devised a rating system for classifying different views within a planning area. Originally, this classification system was used by the Forest Service to classify views that contained primarily natural features. The Consultant has modified this classification system to include the urban landscape. To evaluate scenic resources within the planning area, the Consultant has utilized this rating system to classify views along travel corridors through the planning area. Table No. 31 contains the rating guidelines used by the Consultant.

TABLE 31
VISUAL RATING GUIDELINES

<u>Visual Condition Class</u>	<u>Guidelines</u>
1	All features within the field of view appear to be characteristic of the region - open native grassland, an agricultural field, or vineyard or orchard. Few, if any, man-made features are evident.
2	Most features within the field of view appear to be characteristic of the region - open native grassland,

an agricultural field, or vineyard or orchard. Man-made features are more evident and may attract attention but are visually subordinate to inherent features. Man-made features may include agricultural buildings, residential dwellings, or billboards.

- 3 Man-made features dominate the field of view. These views are urbanized areas. They exhibit well-maintained and well-designed urban areas - proper setbacks, appealing landscaping, compatible land uses and continuity in terms of building scale.
- 4 Man-made features appear incongruous and dominate the field of view. These views are considered urbanized areas. They exhibit unmaintained buildings, minimal landscaping, a mixture of land uses and lack of continuity in terms of building scale.
- 5 Man-made features dominate the field of view. These views are considered urbanized. These urban views are dominated by deteriorating or dilapidated buildings, little or no landscaping, mixture of incompatible land uses, streets are unpaved or in poor condition, curb and gutter is lacking.

Source: U.S. Forest Service, 1974; modified by Collins & Associates, 1991

The Consultant conducted a scenic resources survey in May of 1993. Major travel corridors through the Kerman planning area were rated. The results of this survey are displayed in Exhibit No. 14.

B. AGRICULTURE

Agricultural land is a renewable natural resource. Consumption of this resource is considered to be an irreversible environmental impact. Conversion of prime agricultural land to non-agricultural uses or impairment of its productivity is considered a significant environmental impact under CEQA.

The economy of the Kerman area is very dependent upon agriculture and agriculturally-related industries. An analysis of land use within the planning area reflects this reliance. Almost one-half (1,153 acres) of the 2,387 acres in Kerman's Sphere of Influence is currently used for intensive agricultural purposes (permanent crops and irrigated field crops). Most of the agricultural land within the planning area is considered "prime" farmland or farmland of "statewide significance" by California Department of Conservation (see Exhibit No. 15).

Prime farmland is defined as land having the best combination of soil quality, growing season, and water supply. Prime farmland is generally characterized as agricultural land having soils with a Capability Class of I or II, and a Storie Index greater than 85. Farmland of statewide importance is land other than prime farmland with a good combination of physical and chemical characteristics for the production of crops. Within the planning area, agricultural land overlying soils of the Hanford and Hesperia series are considered to be prime farmland. Agricultural land overlying soils of the Tujunga and Traver series is considered to be farmland of statewide importance. A discussion of the characteristics of these soils and their locations is presented in Chapter 2, Physical Environment.

Water supply is the other key factor in rating the quality of farmland. Prime farmland and farmland of statewide importance must have a constant, reliable source of water. All of the agricultural land within the planning area is within the Fresno Irrigation District (FID) delivery area. The FID delivers approximately 500,000 acre feet of water per year to the 195,000 acres of irrigated land within the district. Approximately 85 percent

of this water comes from the Kings River and the remaining 15 percent comes from the Friant Unit of the Central Valley Project.

The primary crops grown in the Kerman area include raisin grapes, almonds, cotton, and alfalfa. Average yields and gross incomes per acre for farmland in the Kerman area are presented in Table No. 32. Vineyards and orchards are the principal crops found north and east of Kerman, while row crops are predominant in the south and west.

TABLE 32
AVERAGE CROP YIELDS IN KERMAN AREA

<u>Crop</u>	<u>Yield</u>	<u>Average Price/Unit</u>	<u>Gross Revenue/Acre</u>
Cotton	1,000-1,400 lbs/acre	\$.70/lb.	\$770-980 per acre
Alfalfa	7-10 tons/acre	\$110.00/ton	\$770-1,100
Almonds	1,400-1,800 lbs/acre	\$1.25/lb.	\$1,750-2,250
Raisins	1.8-2.8 tons/acre	\$800/ton	\$1,440-2,240

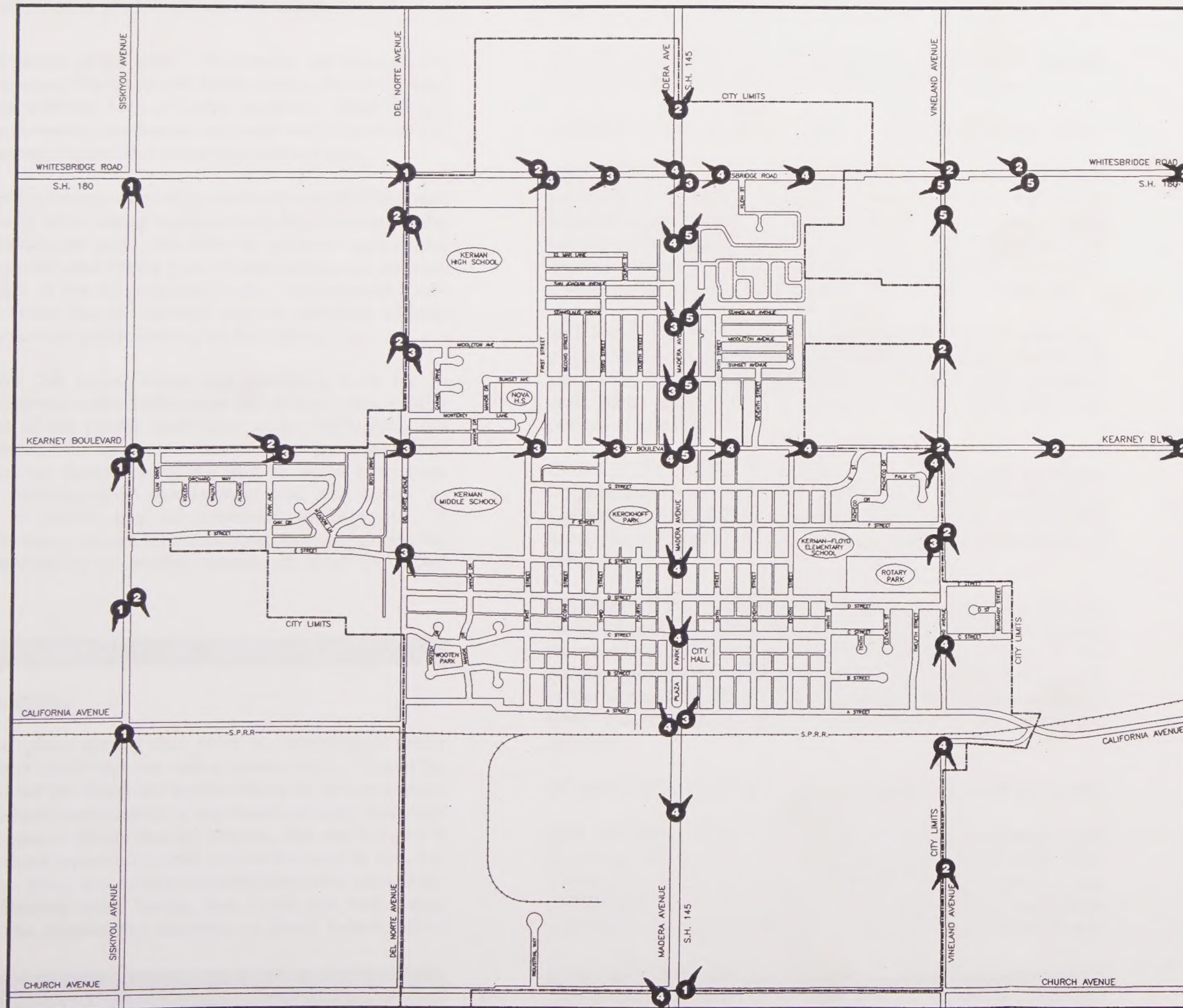
Source: Collins & Associates, 1993

Since 1970, growth in Kerman has removed about ten acres of farmland from production each year. Most of this growth has consumed land that is under row crop or vineyard production.

A recent report released by the State Department of Conservation indicated that between the years 1984 to 1988, Fresno County had 3,898 acres removed from agricultural production. On a regional scale, the American Farmland Trust has estimated that from 1975 to 1989 urbanization has claimed 1,000 to 3,600 acres per year in the ten-county Central Valley, which includes Fresno County. By 2010, the Trust estimates that another 360,000 will become urbanized.

Williamson Act

The Williamson Act was legislated by the State of California in 1967 in an effort to slow the loss of prime agricultural land to urban land uses. The Act provides property tax incentives for landowners who make a commitment to maintain their land in agricultural preserve



VISUAL QUALITY

VISUAL RATING CATEGORIES

- 1** ALL FEATURES WITHIN VIEW APPEAR TO BE CHARACTERISTIC OF THE REGION. STRONG VISUAL HARMONY.
- 2** SOME INCONGRUOUS VISUAL ELEMENTS PRESENT, BUT THEY DO NOT HEAVILY IMPACT THE VISUAL THEME.
- 3** INCREASED NUMBER OF INCONGRUOUS VISUAL ELEMENTS COMPETING FOR ATTENTION.
- 4** UNCHARACTERISTIC VISUAL FEATURES BEGIN TO DOMINATE THE VIEW.
- 5** VISUAL CHAOS. NO DOMINATING VISUAL THEME OR CHARACTER.

POINTER SHOWS DIRECTION OF VIEW

EXAMPLE: **2** SHOWS VIEW LOOKING SOUTHWEST

CITY OF KERMAN GENERAL PLAN UPDATE

EXHIBIT NO. 14



1" = 1,320'
0 500 1000 1500 2000
SCALE IN FEET

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contracts for a period of ten years. Williamson Act contracts are automatically renewed on an annual basis unless a Notice of Non-renewal is filed with the Fresno County Assessor. After filing a Notice of Non-renewal, a landowner must still wait a period of ten years before converting the land to non-agricultural uses.

City and County governments may immediately cancel Williamson Act Contracts only after making mandatory findings concerning the availability of alternate lands, the effect on adjacent agricultural lands, and the public need for the land. These findings are set forth in Section 51282 of the Government Code. Government Code Section 51284 states that no contract may be canceled without holding a duly noticed public hearing on the matter.

Approximately 246 acres within the planning area are in agricultural preserves under Williamson Act contracts (see Exhibit No. 4). Most of the parcels have been under Williamson Act contracts for more than 20 years. Almost all of the annexations within the City of Kerman over the last 20 years have been contiguous to existing urban development and only on an "as needed" basis to provide land for additional urban growth. If necessary, Williamson Act contracts have been canceled during the annexation process as to provide additional land for urban development.

C. BIOTIC RESOURCES

Natural Communities

Associations of plant species that grow in assemblages under similar ecological conditions are called communities. Generally, they are named for the dominant species found in the association. Definition of natural communities is important, not only because it identifies the types of plants that are present, but also because it indicates the habitat types and animal species that may be found in the community. Only two natural communities were found near the Kerman planning area: Valley Sink Scrub and Non-Native Grassland. The community descriptions listed below follow

Holland's 1986 report for the California Department of Fish and Game (CDFG) and the State's Natural Diversity Data Base.

COMMUNITY: Valley Sink Scrub **ELEMENT CODE:** 3621

DESCRIPTION: Low, open to dense succulent shrub lands dominated by alkali-tolerant *Chenopodiaceae*, especially *Allenrolfea occidentalis* or several *Sueda* species. Understories usually are lacking, though sparse herbaceous cover dominated by *Bromus rubens* develop occasionally. The annuals are most active from January to April; the perennials from March to September.

SITE FACTORS: Heavy, saline and/or alkaline clays of lakebeds or playas. High ground water supplies provide capillary water for the perennials. Soil surfaces often have a brilliant white salty crust over dark, sticky clay. Hot, dry summers, damp winters with long periods of tule fog.

CHARACTERISTIC SPECIES: *Allenrolfea occidentalis*, *Delphinium recurvatum*, *Distichlis spicata*, *Kochia californica*, *Lasthenia chrysantha*, *L. ferrisae*, *Nitrophilia occidentalis*, *Salicornia subterminalis*, *Sporobolus airoides*, *Sueda fruticosa*, *S. torreyana*.

DISTRIBUTION: Formerly surrounded the large San Joaquin Valley lakes (Kern, Buena Vista, Tulare, Goose) and north along the trough of the San Joaquin Valley through Merced County to the gooselands of the Sacramento Valley (Solano to Glenn County, west of the Sacramento River); but now essentially extirpated due to flood control, agricultural development, and ground water pumping.

COMMUNITY: Non-Native Grassland **ELEMENT CODE:** 42200

DESCRIPTION: A dense to sparse cover of annual grasses with flowering culms .2 to .5 meters high. Often associated with numerous species of showy-flowered, native annual forbs (wildflowers), especially in years of favorable rainfall. Germination occurs with the onset of the late fall rains; growth, flowering, and

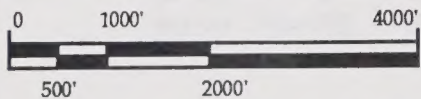
EXHIBIT 15

Important Farmland

- P Prime Farmland
- S Farmland of Statewide Importance
- U Unique Farmland
- L Farmland of Local Importance
- D Urban and Built-up Land
- X Other Land

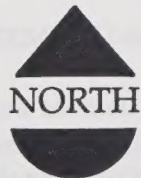
Base Map: Portion of Northeast quarter of the Kerman 15' Quadrangle published by United States Geologic Survey, 1963, revised 1981.

Kerman General Plan

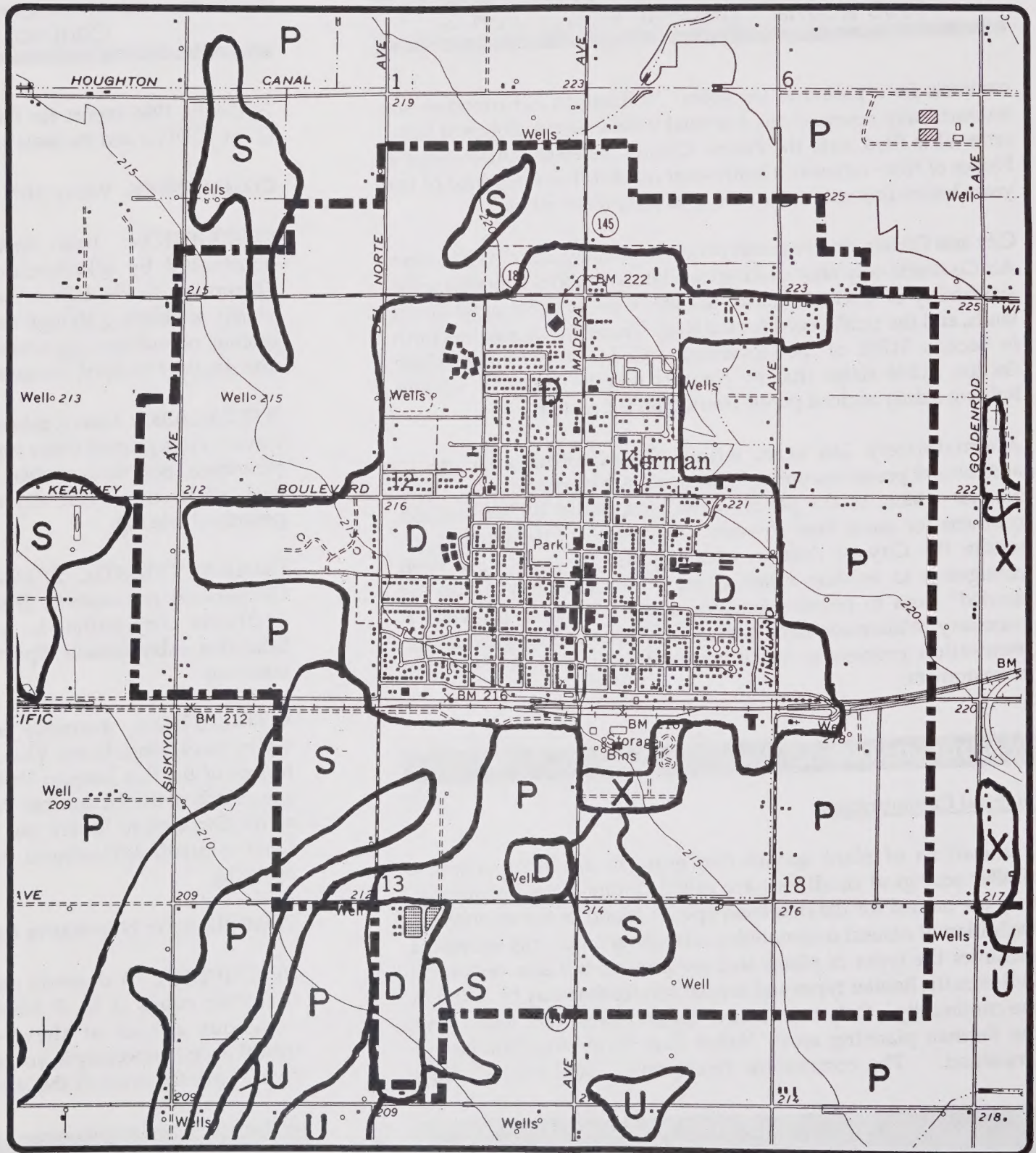


1 inch = 2,000 feet

--- PLANNING AREA
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seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds.

SITE FACTORS: On fine-textured, usually clay soils, moist or even waterlogged during the winter rainy season and very dry during the summer and fall. Oak Woodland is often adjacent on moister, better drained soils.

Rare, Threatened, and Endangered Species

The Natural Diversity Database (CNDDDB) was consulted for a report of occurrences of any rare, threatened, endangered, or sensitive plants, animals or natural communities within the Kerman Quad. The NDDB is a computerized inventory available through the California Department of Fish and Game, Natural Heritage Division.

Two plant species occurrences were reported: one occurrence of *Eriastrum hooveri* (Hoover's woolly star) and one occurrence of *Cordylanthus palmatus* (Palmate-bracted bird's beak). A brief description of each species and its occurrence record, as well as its presumed current status within the Kerman planning area, is included below.

***Eriastrum hooveri* (Jepson) Mason. "Hoover's eriastrum", "Hoover's woolly star"**

Family:	Polemoniaceae
Status:	CNPS - List 1B (Rare, Threatened or Endangered in California and Elsewhere) Federal - Threatened; State - None
Flowering period:	April - June
Habitat:	Saltbush scrub, Alkaline playas

Historic Range:	Fresno, Kings, Kern, San Luis Obispo and Tulare Counties
-----------------	--

Occurrence:	1979; Fresno Co., "4.7 mi. S of Kerman RR Station along Hwy. 145 (Madera Ave.)"
-------------	---

Discussion:

This small cyclical, ephemeral annual, of the family Polemoniaceae (Phlox family), was once fairly widespread throughout the alkaline soils of the San Joaquin Valley. This plant is often found in openings in Atriplex scrub where cryptogamic crusts have developed on the soil surface (Stebbins et al., 1992). Much of its native habitat has been converted to agriculture. It was known to be extant at 23 sites throughout the San Joaquin Valley in 1986 (Taylor and Davilla).

The Fresno County occurrence of *Eriastrum hooveri* described above, lies approximately 3 3/4 miles south of the Kerman Urban Area Boundary, "on slight hummocks (where less alkaline) in alkaline plain". The habitat that supported this population of *E. hooveri* has probably been eliminated due to agricultural conversion. No habitat capable of supporting this species is expected to be found within the Kerman General Plan Update Planning Area, although habitat may exist on the KMJ (radio tower) property (2/3 mile south of UAB).

***Cordylanthus palmatus* (Ferris) J. F. Macbride. "Palmate-bracted bird's beak"**

Family:	Scrophulariaceae
Status:	CNPS - List 1B (Rare, Threatened or Endangered in California and Elsewhere); Federal - Endangered; State - Endangered
Flowering period:	June - July
Habitat:	Alkaline scrub in seasonally flooded

lowlands

Historic Range: Fresno, Madera, Alameda, Colusa and Yolo Counties

Occurrence: 1965; Fresno Co., "6 Mi. S of Kerman (on Madera Ave.)"

Discussion:

Palmate-bracted birds-beak (*Cordylanthus palmatus*) is a hemiparasitic species in the family Scrophulariaceae (Figwort family) that has been severely impacted by the conversion of its native habitat (alkaline playas) to agriculture (Heckard 1977). The Madera Avenue site south of Kerman was last visited in 1983 and plants were not observed. It was reported that the habitat was lost due to soil reclamation and the area was under cultivation.

Suitable habitat may exist for this species on the KMJ property approximately 2/3 mile south of the Kerman Sphere of Influence.

Other Species of Concern

Another species, not reported by NDDDB, that is likely to occur in the general area is the San Joaquin Kit Fox (SJKF), a federally endangered species (J. Stebbins, pers. comm. 1993). It is known to occur on the KMJ property within one mile of the Kerman Urban Area Boundary. If the KMJ property supports SJKF dens, it is likely that San Joaquin Kit Fox could forage at times within the UAB. This, however, has not been previously documented.

San Joaquin Kit Fox - The kit fox is endemic to central California and was once common in the southern San Joaquin Valley. Their population has declined dramatically due to habitat loss caused by urbanization and cultivation of their native habitat. The kit fox is listed as "threatened" by the State of California and "endangered" by the Federal government.

The San Joaquin kit fox is a burrow dweller and is known to occur in

both of the natural communities found within the planning area. It is an opportunistic feeder, eating whatever prey species are locally abundant. Prey can include insects, birds, rodents and other small mammals.

Burrowing owl - This owl is a state-listed "Species of Special Concern" and is also known to occur at the KMJ property (J. Stebbins, pers. comm. 1993).

D. CULTURAL AND HISTORICAL RESOURCES

Human presence in the southern San Joaquin Valley probably dates back as far as 10,000 - 12,000 years. Artifacts found along the southern shore of Tulare Lake are similar to the Clovis points associated with the big game hunters of the Great Plains. Excavations of a site at Buena Vista Lake indicate that it may have been continuously occupied for more than 8,000 years. These cultures may represent the penetration of Penutian speaking people into Central California.

The Yokuts Indians occupied the entire San Joaquin Valley at the time of European contact. The Tachi tribe of the Southern Valley Yokuts occupied the northern and western shores of Tulare Lake and probably ranged as far as the eastern edge of the coast ranges. The Southern Valley Yokuts subsisted on fish, waterfowl, and mollusk gathered in the wetlands formed by Tulare, Buena Vista and Kern Lakes.

A search of the California Archaeological Inventory database revealed that no known archaeological sites are located within the planning area or on adjacent properties. Two linear archaeological investigations have been conducted near the planning area. In 1988, Noble and Weigel conducted a 4.5 mile survey along Madera Avenue, south of the city limits. A second, smaller survey north of the planning area was also conducted but did not reveal any archaeological finds.

Charles L. Palmer writes in his book *The Story of the Kings River*,

that in May of 1871, the Fresno Canal and Irrigation Company was formed. Palmer wrote:

"with this additional water and with the enlarged canal, more and more land was broken for cultivation. Land was leveled and cross-checked with miniature dikes to contain the water; grain was planted and water turned on the land. . . . "For those dry land farmers outside the development area served by the Fresno Canal and Irrigation Company, water became imperative. . . . New ditch companies were formed . . . and Kings River water was transported as much as twenty to thirty miles, even to the banks of the San Joaquin River to the north."

This development of irrigation water was probably the precursor to agricultural development in the Kerman area. It enabled farmers to transition from dry land grain farming to more permanent crops.

Railroad development was the next significant development in Kerman. In 1892, the Southern Pacific Railroad completed a line that started in Tracy and passed through Newman, Los Banos, Kerman and Fresno. Originally, the railroad station that was located in Kerman was called "Collis", named after Collis P. Huntington, president of the Southern Pacific Railroad.

In 1900, William G. Kerckhoff and Jacob Mansar of Los Angeles purchased 3,027 acres of land from the Bank of California, which had become insolvent and was required to liquidate its land holdings.

In 1906, Collis was renamed Kerman. It was the Fresno Irrigated Farms Company that began to employ persons in the Kerman area. This company utilized water from the Enterprise Canal, which diverted water from the Kings River to the Kerman area, to enhance the viability of agriculture in the Kerman area. The Kerman News, which open its doors in 1908, advertised the following:

"Kerman vineyards and orchards - - pay from \$100 per acre, never had a crop failure, finest irrigation system on earth, unlimited water supply, small tracts 10-20 acres; 10,000 acres of fine fruit land."

Three churches were established in the Kerman area between 1905 and 1910. These churches provided the spiritual support for the farming families that had settled in the Kerman area. They were: Bethany Swedish Lutheran Church, Presbyterian Church, and the Beulah United Brethren Church. In 1909, the Presbyterian Church was replaced by the Methodist Episcopal Church, which built the first church in Kerman.

By 1910, Kerman had developed from a railroad station into a thriving community of about 400 persons. Kerman was economically supported by the local agricultural economy that had prospered as a result of water for irrigation being diverted from the Kings River. Dairies and the raising of alfalfa, grapes, wheat and deciduous fruit crops were the primary agricultural operations that surrounded Kerman.

A glimpse of Kerman around 1910 was best described in an article in Sunset magazine and by the advertising section of the Kerman News. A writer for Sunset described Kerman as follows:

"Kerman is a 25,000 acre tract with no sticks or stones. It is watered by the Kings River. This is a land where, not too long ago, cattle grazed, then came the wheatfields of vast acreage and yield. It is on the Southern Pacific line, is a young town and growing rapidly. The town has a waterworks and a sewer system and a \$25,000 business block, \$15,000 hotel, lumber yards, alfalfa mill, creamery, fine school house, cement sidewalks, electric power station, weekly newspaper, band and baseball team. Ten acres will make a man independent and twenty acres will support him luxuriously!"

Businesses that were advertising in the Kerman News during this time were: California Stock Feed Company, Kerman Lumber Company, Kerman Telephone Company, Dr. Crenshaw, Kerman Drug Company, Lewis and McNight, carpenters; Smith and Neeley, builders; W.W. Edwards Merchandise and Hardware Company; Tipton Well Digging; Edwards and Graham, real estate; Kerman Mercantile Company; First National Bank; S.P. Barber Shop; Bank Barber Shop; Hotel Walley; Kerman Machine Works; Kerman Livery Stables; Brainard Smith, dairyman; Kerman Poultry Farms;

Kerman Inn; Kerman Tract, Kerman Melon Growers Association; Kerman Garage; San Joaquin Light and Power Company; and Fresno Irrigated Farms.

By 1910, Kerman was beginning to develop consistent with the original townsite laid out by the Southern Pacific Railroad - Madera Avenue and Kearney Drive had been established as major roadways, the parkway on Madera Avenue had been constructed, commercial buildings lined both sides of Madera Avenue, and residential neighborhoods existed on the east and west sides of Madera.

From 1910 to the present, numerous milestones have occurred in the community. Some of the more prominent events are as follows:

- 1911 - Precursor to Chamber of Commerce was formed.
- 1912 - Kerman Union High School was constructed.
- 1916 - Drilling for oil occurred south of town.
- 1921 - Madera Avenue was paved from the Southern Pacific tracks to the San Joaquin River; street lights were installed from the tracks to Whitesbridge Avenue.
- 1934 - Two cotton gins were constructed.
- 1936 - The Kerckhoff Land Company gave 27 lots to the Athletic Park Association for an athletic park (it later became Kerckhoff Park).
- 1941 - Shell Oil discovered a large gas field south of the City.
- 1944 - Kerman Theatre was opened.
- 1946 - A vote for incorporation was defeated; later that year citizens approved incorporation, 107 to 70. Madera Avenue's commercial identity was apparent with the existence of a restaurant, drive-in, electric shop, theatre, automobile agency, dry goods store and others.
- 1950 - Census established population at 1,544 persons. The City acquired the water and sewer system from the Kerman Water and Sewer Company.
- 1953 - The old elementary school was transformed into the Kerman City Hall.
- 1955 - Kerman conducted a special census that indicated the City had a population of 1,784. That year Kerman benefited

from the construction of the city's first supermarket.

- 1958 - A bond issue provided for the construction of curbs and gutters throughout the city.
- 1964 - The present day junior high school was constructed.
- 1967 - The present day Kerman High School was constructed.
- 1979 - Kerman welcomed its first auto dealership - H&J Chevrolet - and its first shopping center - Kerman Plaza Shopping Center.

E. AIR QUALITY

The planning area lies within the San Joaquin Valley Air Basin. This air basin has been designated as a non-attainment area for failing to meet National Ambient Air Quality Standards (NAAQS) for two pollutants: ozone and particulates. Table No. 33 shows State and federal ambient air quality standards for these and other pollutants.

TABLE 33
AMBIENT AIR QUALITY STANDARDS

<u>Pollutant</u>	<u>Averaging Time</u>	<u>State Standards</u>	<u>National Standards</u>
Ozone	1-hour	.10 parts per million	.12 parts per million
Carbon Monoxide			
	8-hour	9.0 ppm (10 mg/m ³)	10 mg/m ³ (9 ppm)
	1-hour	20 ppm	40 mg/m ³
Nitrogen Dioxide			
	annual average	-	100 ug/m ³ (.05 ppm)
	1-hour	.25 ppm (470 ug/m ³)	
Sulfur Dioxide			
	24-hour	.05 ppmg (131 ug/m ³)	365 ug/m ³ (.14 ppm)
	1-hour	.25 ppm	
PM ₁₀	24-hour	50 ug/m ³	150 ug/m ³

Source: Air Resources Board, California Air Quality Data Summary

Accumulation of high concentrations of these pollutants has been attributed to the basin-like topography of the Southern San Joaquin Valley and the presence of a low level inversion layer for much of the year.

The Valley is an attainment area for carbon monoxide (CO), however, in localized conditions - along freeways or major intersections, traffic generated by development projects can contribute significantly to air quality impacts associated with excessive CO levels. Significant levels of CO can cause respiratory problems among humans.

Ozone is the product of the reaction of nitrogen oxides and reactive organic gases with sunlight. The major source of these gases is motor vehicle emissions. Ozone is a highly reactive oxidant which has been shown to damage vegetation and rubber products, and cause respiratory problems among humans, especially younger children and seniors who have respiratory problems. Studies have shown that crop losses due to ozone damage may be as high as 10 to 25 percent.

Particulates are fine particles of soot, dust, fumes and mist that are suspended in the air. Airborne particulates measuring less than 10 microns in diameter (PM-10) are capable of causing respiratory irritation because they enter the lungs and can become trapped. Major sources of particulate pollution in Fresno County are agricultural practices, road dust, construction activities, wood burning stoves, and forest fires.

Fresno County does not have an air monitoring station in Kerman, however, the Kings County Air Pollution Control District has an air monitoring station in Hanford, about 20 miles south of Kerman. Measurements generated from this station are displayed in Table 34.

The national air emission standard for ozone is 0.12 ppm while the California standard is 0.10 ppm. In 1989, data gathered at the Hanford air quality monitoring station showed that the National standard was exceeded on one day and the State standard was

exceeded on 51 days.

Particulate pollution is measured as PM-10. The national air emission standard for PM-10 is an annual average level of 50 micrograms per cubic meter. The California standard is 30 micrograms. Measurements of PM-10 at the Hanford station showed that the National standard was exceeded 27 days in 1989 while the State standard was exceeded 215 days.

The national standard for CO is 9.5 ppm while the California standard is 9 ppm. The Hanford station does not monitor CO levels.

Ozone levels which exceed State and federal standards occur most frequently from July to October. Sampling for ozone began in Kings County in 1987 and the first full year of data became available for 1988. Ozone monitoring at the Hanford station in 1988 consisted of 8,141 one hour observations. The NAAQS was exceeded on three days for a total of six hours. The NAAQS for ozone is .12 ppm averaged over a one hour sampling period. The State standard of .09 ppm was exceeded on 34 days for a total of 86 hours.

TABLE 34
AIR QUALITY MONITORING DATA, HANFORD STATION

Year	Ozone		PM10	
	State	National	State	National
1985	58 days	2 days	179 days	6 days
1986	66	2	180	6
1987	na	na	163	0
1988	86	6	117	0
1989	51	1	215	27
1990	na	0	na	na

Note: Days in which state and national air emission standards were exceeded at the Hanford monitoring station. The PM10 counts have been annualized. Source: Kings County Health Department

F. WATER QUALITY

The aquifer underlying Kerman has been plagued with a number of contaminants, which render certain stratas of the aquifer unuseable for domestic purposes. The primary contaminant has been uranium. The presence of this element has caused the City of Kerman to drill four new wells.

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PART 3

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EXECUTIVE SUMMARY

PURPOSE

The purpose of the Executive Summary is to provide the public and local decision-makers with a brief summary of the environmental consequences of the proposed project.

SIGNIFICANT UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

Impacts of the project for which the decision-maker must issue a "Statement of Overriding Considerations" under Section 15093 of the CEQA Guidelines as amended if the project is approved.

Agricultural Resources

Environmental Impact/Mitigation Measures

The project will lead to the removal of between 390 and 831 acres of prime and unique agricultural land from production over the 20-year planning period. Furthermore, additional urbanization in the planning area will increase land use conflicts between agricultural and urban uses.

Mitigation Measures

The DEIR proposes numerous mitigation measures; however, implementation of these measures will not reduce this impact to an insignificant level. Mitigation measures proposed by the DEIR are policies and action programs contained in the General Plan, Land

Use Element. These measures involve application of large-lot agricultural zoning, increased urban residential densities, delineation of growth boundaries and implementation of in-fill programs.

Residual Impact

Significant, unavoidable impact.

Air Quality

Environmental Impact/Mitigation Measures

The increase in population by as high as 11,608 persons over the planning period will have an adverse impact on the air quality in Kerman, especially pollutants such as NO_x, PM₁₀, and SO_x. Poorer air quality will result in health problems for young children, the elderly and persons with respiratory problems. Reduced yields of some agricultural crops will also result.

Mitigation measures proposed by the DEIR are policies and action programs contained in the General Plan, Land Use and Circulation Elements. These measures involve congestion management, public transportation, and encouraging persons to walk or ride bikes. In addition, other mitigation measures include a variety of rules that will be implemented by the San Joaquin Valley Air Pollution Control District.

Short-term air quality impacts resulting from implementation of the General Plan include dust emanating from construction sites. This impact will become a nuisance for adjacent residents. Mitigation of this impact can be achieved through dust control measures, including paving, daily watering and discontinuing earth work when winds exceed certain velocities.

Cumulative Impact

The poorer air quality in the Kerman area will combine with air emissions generated in other parts of the San Joaquin Valley to have

an adverse cumulative impact on the air quality in the Valley.

Residual Impact

Short-term air quality impacts will be reduced to an insignificant level with the aforementioned mitigation measures. Long-term air quality impacts will remain significant and unavoidable.

Schools

Environmental Impact/Mitigation Measures

During the 1992/931 school year, the Kerman Unified School District had 3186 students enrolled. Approximately 59 percent of these students were enrolled in grades K-6, 16 percent in grades 7-8, and 25 percent in grades 9-12. Implementation of the General Plan will provide for a projected student enrollment by the year 2013 of 5884 students - K-6 enrollment, 3035 students; 7-8 enrollment, 968 students; and high school enrollment, 1881 students. These projections indicate that Kerman Unified is going to be significantly impacted by future growth. By 2013, elementary school enrollment will have increased by 1,145 students; the middle school by 470 students; and the high school by 1,128 students. In 1993, all Kerman Unified schools were operating at above capacity.

Given the fiscal situation at the State level and the difficulty of local school districts to pass bond measures for school construction, the General Plan's projected growth will have a significant adverse impact on the School District.

The Land Use Element identifies two new elementary school sites in the planning area, one west of Siskiyou and south of Kearney and the second east of Vineland and north of Kearney. The Element also identifies a second middle school site, located adjacent to the elementary school site that is east of Vineland.

Kerman Unified has mitigated some of the fiscal impacts associated with increasing enrollments by increasing its school impact fees from \$1.58 per square foot to \$2.65 per square foot. The District has

concluded that even with this increase, the District still has insufficient funds to finance construction of needed school facilities. The District has concluded that adding the following policy to the General Plan will reduce the General Plan's impact on schools to an insignificant level. Failure to add this policy to the General Plan will result in a significant, unavoidable impact.

POLICY: Where significant impact on school district facilities is identified by Kerman Unified School District, the impact shall be mitigated by an agreement between the school district and the developer. This policy shall apply to all projects that require adoption of a general plan, a general plan amendment, zoning, rezoning or annexation. The evidence of an agreement shall be written notification by an authorized representative of the school district affected.

Residual Impact

Implementation of the above policy will reduce the General Plan's impact on schools to an insignificant level. If the policy is not adopted, the General Plan will have a significant, unavoidable impact on Kerman's schools.

SIGNIFICANT ADVERSE ENVIRONMENTAL IMPACTS THAT CAN BE MITIGATED OR AVOIDED

Impacts of the project that can be reduced to an insignificant level should the decision-makers incorporate mitigation measures into the project as per Section 15091 (1) of the CEQA Guidelines, as amended.

Seismic and Geologic Hazards

Environmental Impact/Mitigation Measures

The planning area is situated in a region where strong ground shaking can occur. Examples have been the 1983 Coalinga earthquake, which had a Richter scale measurement of 6.7, and the 1985 Avenal earthquake, which had a 5.5Rs.

Impacts resulting from a future earthquake could include damage to buildings, infrastructure, and secondary impacts, such as the financial implications on Kerman for repair and/or replacement of infrastructure. Policies and action programs contained in the Kerman Safety Element will reduce the aforementioned environmental impact to an "insignificant" level. The Element's policy regarding seismic safety states: "The City shall insure that all new and rehabilitated structures are constructed to meet adequate seismic safety standards."

Residual Impact

Adoption of the Safety Element will reduce potential seismic impacts to an insignificant level.

Noise

Environmental Impact/Mitigation Measures

The most significant levels of noise in Kerman are generated by traffic on Madera Avenue and Whitesbridge Road. Madera is especially noisy because of its high daily traffic count, 18,000 average daily trips per day, and its large percentage of trucks, 19 percent of total traffic volume. Stationary sources that generate significant levels of noise, although short in duration, include Central Valley Concrete, Helena Chemical and industrial plants located in the Kerman industrial park.

The Kerman General Plan attempts to avoid noise conflicts by insuring that noise sensitive land uses are not located near Madera Avenue, Whitesbridge Road, or noise-generating land uses, such as industrial or transportation uses. The General Plan has designated most of the parcels that front onto Madera or Whitesbridge for office, commercial, or industrial uses. These types of land uses are not as sensitive to noise as residential uses. The General Plan does, however, designate some parcels that front onto the south side of Whitesbridge east of Madera Avenue as multi-family residential. Persons living in these multi-family complexes could experience some noise-related problems if they lived adjacent to Whitesbridge.

The General Plan has avoided the potential conflict between noise-generating land uses and noise sensitive land uses by insuring that these types of land uses are spatially separated. For example, the General Plan places service commercial and industrial uses south of the California Avenue/Southern Pacific Railroad alignment while it places noise-sensitive uses - residences, parks, and schools north of this alignment.

Policies and action programs contained in the Kerman Land Use and Noise Elements will reduce the aforementioned environmental impact to an "insignificant" level.

Residual Impact

Adoption of the Noise Element and model noise ordinance will reduce potential noise impacts to an insignificant level.

Scenic Resources

Environmental Impact/Mitigation Measures

Implementation of the General Plan could have a significant adverse impact on the scenic qualities of natural and man-made features in the planning area. As residential, commercial and industrial urbanization occurs, the amount of man-made improvements will begin to dominate what was once open space - agricultural field or open land.

Urbanization can also have an adverse impact on the scenic qualities of the man-made features of the community. An apartment complex that is located in an existing single family neighborhood and improperly designed can degrade the continuity and appearance of the neighborhood. A service commercial or industrial use that is poorly landscaped or designed and located along one of Kerman's entryways can present a poor visual image of the community.

The policies and action programs contained in the Land Use, Circulation, and Conservation, Open Space, Park and Recreation

elements will mitigate the project's impact on the scenic resources in the planning area.

Residual Impact

Adoption of the Land Use, Circulation, and Conservation, Open Space, Park and Recreation elements will reduce the project's impact on scenic resources to an insignificant level.

Cultural Resources

Environmental Impact/Mitigation Measures

Urban development and its attendant improvements, such as streets, infrastructure, building site improvements, and utility lines, can destroy or disturb historic or prehistoric resources. These resources have historic and educational value. For Native Americans, prehistoric resources may have religious and spiritual values.

The mitigation of impacts to cultural resources is dependent on the uniqueness of each individual site. The Deddah Bill, AB 952, provides specific criteria in the determination of the "unique" qualities of a site. Cultural resources that will be disturbed or destroyed by development is considered to be a significant adverse impact. Under the law, any resource not meeting the AB 952 criteria may simply be recorded and no further consideration is required.

The California Environmental Quality Act (CEQA) requires the protection of any "unique" cultural resource. Any development that causes a unique resource to be uncovered would require some attempt to preserve the resource.

Residual Impact

At this time it can not be determined if implementation of the General Plan will have a significant impact on cultural or historic resources in the planning area.

Ground Water Quality

Environmental Impact/Mitigation Measures

The potential of urban development contaminating the ground water in the planning area is remote. Depth to groundwater averages from 80 to 100 feet and Kerman's four wells are presently drawing water from 300 to 500 feet. Water that is contaminated as a result of urban development is generally associated with urban storm runoff from streets, yards, parking lots and other urban improvements. This contaminated water is currently diverted to Kerman's network of retention and detention ponds. Once in the ponds, the water either percolates into the ground or it evaporates. All new development in Kerman will be required to connect to Kerman's storm drainage system. This requirement is consistent with policies and action programs contained in the Land Use Element.

Industrial development can potentially contaminate the planning area's ground water. Some waters emanating from a plant site may be stored on-site, typically in a lined retention pond. Should this pond leak, because the lining breaks, the contaminates in the pond could percolate into the ground water system thereby polluting the aquifer and endangering Kerman's drinking water. Any industry storing liquids on-site will be required to construct retention ponds consistent with standards imposed by the Regional Water Quality Control Board.

Residual Impact

Adoption of the Land Use Element and construction of industrial retention ponds consistent with Regional Water Quality Control Board guidelines will reduce the General Plan's impact on ground water quality to an insignificant level.

Solid Waste Disposal

Environmental Impact/Mitigation Measures

Future solid waste volumes generated by Kerman's growth will have the impact of causing the American Avenue landfill site to reach capacity at a more rapid rate, under existing solid waste management operations. However, under AB 939, the City should be successful in extending the life-expectancy of the landfill site through recycling, reuse and diverting hazardous materials to the Chemical Waste Facility at Kettleman Hills.

Currently, Kerman is generating about 4682 tons per year of solid waste, approximately 1481 pounds per year per person. Based on the projected solid waste figures, assuming AB 939 is effectively implemented by the City and BFI, the General Plan will not have a significant impact on accelerating the depletion of the landfill's capacity. In fact, under AB 939, the amount of solid waste generated by the planning area decreases from 1995 to 2007. It is only until 2008 that the amount of solid waste generated by the planning area exceeds 1993 tonnage levels.

Residual Impact

Implementation of AB 939 will reduce the General Plan's impact on solid waste collection and disposal services to an insignificant level.

Fire Protection

Environmental Impact/Mitigation Measures

Development in the planning area will increase the demand for additional fire services in Kerman. This could require the North Central Fire Protection District to hire more firemen and purchase additional equipment.

The General Plan proposes that all new development be constructed within the 5-minute response time of the Kerman fire station; the Kearney station would continue to provide secondary

coverage. However, the addition of more structures (residential, commercial, public and industrial) in the planning area could have an impact on the ability of the North Central Fire District to adequately provide fire protection services to the planning area.

Residual Impact

Adoption of the Land Use and Safety Elements provide policies and action programs that will mitigate the General Plan's impact on fire protection services and reduce it to an insignificant level.

Land Use Conflicts

Environmental Impact/Mitigation Measures

Land use conflicts are created when one land use causes occupants of another land use to be exposed to hazards or inconveniences, such as dust, pollutants, noise, safety hazards, traffic congestion, and visual blight. Some land uses are not as sensitive to the aforementioned conditions as others. Uses which are very sensitive to the above conditions include residential dwelling units, schools, hospitals, and parks.

Residual Impact

Adoption and the implementation of policies, action programs, and performance standards identified in the General Plan will reduce industrial, commercial and multi-family land use conflicts to an "insignificant" level. Agricultural land use conflicts can not be reduced to an insignificant level.

Circulation

Environmental Impact/Mitigation Measures

The traffic volumes in the planning area are expected to increase as a result of the implementation of the General Plan. Although the increases are significant in some cases, it appears that the existing circulation system, except for Kerman's arterial roadways, has the

capacity to accommodate the traffic volumes that have been projected for the year 2013.

The DEIR indicates that Kerman's collector roadways will carry less than 6000 daily trips per day in 2013 and will operate at LOS "B" or better.

Kerman's two arterial roadways, Madera Avenue and Whitesbridge Road, will experience significant increases in traffic due to both growth in the region and in the planning area. Regional growth will result in more through traffic on each roadway while growth in the planning area will result in traffic volume increases on segments of each roadway and increases in turning movements at various arterial intersections.

The Madera at Whitesbridge and Madera at Kearney intersections were analyzed with projected 2003 and 2013 peak-hour turning movements. The results of this analysis indicate that numerous approaches will be operating at a LOS of "C" or worse.

Adoption of the Circulation Element will provide policies and action programs that will mitigate the General Plan's impact on Kerman's circulation system. A specific policy and action program that will mitigate many of the General Plan's impacts on the circulation system involves the collection of a development impact fee that finances the future street, signal, railroad crossing and landscaped median projects.

Residual Impact

Implementation of the policies and action programs in the Circulation Element will reduce the General Plan's impact on the Kerman circulation system to an insignificant level.

Sewer System

Environmental Impact/ Mitigation Measures

The waste water treatment plant can sufficient capacity to accommodate another 5,700 people or 1,765 residential units. This capacity would allow Kerman to develop to the years 2004 or 2009, depending of which growth rate experiences. Under either growth scenario, Kerman will be required to expand the treatment plant during the planning period. Failure to expand the plant could require the city to impose a development moratorium. This moratorium would prevent the city from implementing the policies and action programs contained in the General Plan. Further, it could artificially inflate the cost of housing in the community thereby preventing persons from moving or building in the community.

The polices and action programs contained in the Land Use Element will mitigate the General Plan's impact on the Kerman's sewer system. One such policy and action program reads as follows:

POLICY: Kerman shall install water, sewer, and storm drainage improvements that correct existing infrastructure deficiencies and meet the demand of future growth.

ACTION:

Kerman's water, sewer, and storm drainage master plans shall be reviewed in order to insure that they can properly and efficiently serve future development provided for by the Land Use Element.

Kerman's water, sewer, and storm drainage development fees shall be reviewed on an annual basis. This review should focus on the relationship between the amount of fees being collected for each system and the future capital needs of each system based on development trends in Kerman.

Residual Impact

Adoption of the polices and action programs contained in the Land Use Element will reduce the General Plan's impact on the Kerman's sewer system to an insignificant level.

Water System

Environmental Impact/ Mitigation Measures

Assuming that during the planning period Kerman's per capita water consumption remains comparable to 1993 figures, the Consultant projects that the peak water demand in 2013 will be 17.0 million gallons per day. This projection assumes industrial water demand, as a percentage of total city water demand, remains constant and that the population in 2013 will be 17931, which is the high population projection used in the General Plan.

This projected peak water demand will require Kerman to install additional city wells and water lines. In addition, increased pumping could create a overdraft condition in the aquifers underlying Kerman. Such a condition could lower the static water level in the aquifers that produce the City's water. This decline in water levels could increase the city's pumping costs and/or it could cause the city to drill new wells or increase the depth of existing wells.

The policies and action programs contained in the Land Use Element will mitigate the General Plan's impact on the Kerman's water system. One such policy and action program reads as follows:

POLICY: Kerman shall install water, sewer, and storm drainage improvements that correct existing infrastructure deficiencies and meet the demand of future growth.

ACTION:

Kerman's water, sewer, and storm drainage master plans shall be reviewed in order to insure that they can properly and efficiently serve future development provided for by the Land Use Element.

Kerman's water, sewer, and storm drainage development fees shall be reviewed on an annual basis. This review should focus on the relationship between the amount of fees being collected for each system and the future capital needs of each system based on development trends in Kerman.

Residual Impact

Adoption of the policies and action programs contained in the Land Use Element will reduce the General Plan's impact on the Kerman's water system to an insignificant level.

Storm Drainage

Environmental Impact/Mitigation Measures

Implementation of the General Plan will change the existing runoff patterns throughout the planning area. The introduction of streets and other improvements will increase the volume of runoff and the rate at which the lands drain.

It will be necessary to construct ponding basins and install new pipelines and other improvements in order to serve new development and not impact the existing drainage conditions in Kerman.

The quality of stormwater runoff emanating from the planning area could also be affected by the implementation of the General Plan. It is generally recognized that urban stormwater runoff carries higher levels of metals, oils, greases and other contaminants than runoff from undeveloped lands. Therefore, as undeveloped lands in the planning area are urbanized, the level of contaminants in the runoff would be expected to increase. This increase in contaminants could contaminate the soil at the bottom of stormwater ponding basins.

The policies and action programs contained in the Land Use Element will mitigate the General Plan's impact on the Kerman's storm drainage system. One such mitigation measure is as follows:

Future storm water park/pond basins should be constructed with a fenced "low-flow" area in order to contain potential storm water contaminants in an isolated area. A "low-flow" area will also keep the storm water from encroaching on the active recreational areas during low intensity storm events.

Residual Impact

Adoption of the policies and action programs contained in the Land Use Element will reduce the General Plan's impact on the Kerman's storm drainage system to an insignificant level.

ALTERNATIVES TO THE PROPOSED PROJECT

All of the alternatives discussed in the DEIR have a greater environmental impact than the proposed General Plan. Even the "no project" alternative will have an adverse impact on the environment in that Kerman would be required to develop under the current General Plan and zoning classifications. The current General Plan does not have in place policies and action programs that minimize environmental implications.

AREAS OF CONTROVERSY

Areas of controversy include: overcrowded schools, loss of agricultural land, multi-family development in or near single family development, alignment of collector streets, construction of landscaped medians that may prevent through traffic, and traffic congestion along Kerman's two State highways.

SECTION 1 • INTRODUCTION

1.01 BACKGROUND

The Kerman General Plan is comprised of six State-mandated general plan elements - land use, circulation, conservation, open space, noise and safety. Under the California Environmental Quality Act (CEQA), the Kerman General Plan is considered a "project." As the lead agency, the City of Kerman has determined that the General Plan will have a "significant" impact on the environment and that a draft environmental impact report (DEIR) is required to be prepared.

The "project area" has been defined by the City of Kerman as all that land that is contained within the City's sphere of influence, as delineated by the Fresno County Local Agency Formation Commission.

The City sent a Notice of Preparation (NOP) to state responsible and trustee agencies to solicit their input on the scope and content of the DEIR. Their comments and concerns were considered during the preparation of the DEIR.

1.02 PURPOSE

The primary purposes of the DEIR is to inform the public and local decision-makers of the potential environmental effects associated with the implementation of the General Plan; the mitigation measures that will reduce or eliminate the environmental effects

caused by the General Plan; specifies programs that will monitor the lead agency's compliance with the adopted mitigation measures, and alternatives to the proposed General Plan, including the "no project" and "environmentally preferred" alternatives.

1.03 SPECIFICITY

The CEQA Guidelines (Section 15146) states that a DEIR need only be as specific as the project being proposed. In other words, this document will describe in broad terms the environmental effects caused by the General Plan. The DEIR should focus on the secondary environmental effects resulting from the implementation of the General Plan, such as growth-inducing impacts related to services and infrastructure.

1.04 TIERING

In a process call tiering, the CEQA Guidelines (Section 15152) encourages the City refer to the General Plan EIR when considering other discretionary projects that follow approval of, and are consistent with, the General Plan, including zoning ordinance amendments, conditional use permits, subdivisions, and capital expenditure projects. Tiering as defined by Section 15385 of the Guidelines means:

"The coverage of general matters and environmental effects in an EIR prepared for a policy, plan, program or ordinance followed by narrower or site-specific EIRs or Negative Declarations that incorporate by reference the discussion in any prior EIR which concentrate on the environmental effects that (a) can be mitigated, or (b) were not analyzed as significant effects on the environment in the prior EIR."

Kerman has three options under the tiering process in terms of the environmental review on future projects. (1) If the General Plan EIR addresses the proposed project's potential environmental effects, the City can use the General Plan EIR for the project. (2) If the

General Plan EIR did not address the proposed project's environmental effects but the initial study indicated the project would not have a significant impact on the environment, the City can prepare a negative declaration for the project. (3) If the General Plan EIR did not address the proposed project's environmental effects and the initial study indicated the project would have a significant impact on the environment, the City shall prepare a subsequent or supplemental EIR that discusses the environmental effects not covered in the General Plan EIR. The supplemental EIR can refer to the General Plan EIR for a discussion of the environmental effects already covered in the General Plan EIR.

1.06 FORMAT

As previously mentioned, the DEIR and General Plan have been combined into one document, containing three parts. Part 1 contains the general plan elements - land use, circulation, open space, conservation, safety and noise; Part 2 the existing conditions (environmental setting) in the project area; and Part 3, the environment impacts - environmental impact analysis, project alternatives and other types of impacts, such as growth-inducing and cumulative impacts.

To insure that the DEIR is a meaningful document for decision-makers and the public, the environmental impact analysis section, which is the heart of the DEIR, has been formatted to promote a sequential discussion of each environmental impact, from existing conditions to residual impacts. This section is formatted as follows:

4.0 ENVIRONMENTAL IMPACT ANALYSIS

4.01 ENVIRONMENTAL FACTOR

A general description of the environmental factor and pertinent definitions will be included in this subsection.

4.011 Existing Conditions

Existing conditions of the environmental factor are either described or referenced in this subsection.

4.012 Environmental Impact

This subsection will describe the environmental impact caused by the project.

4.013 Mitigation Measures and Monitoring

This subsection will specify measures - development standards, programs, or capital improvement projects - that will reduce or eliminate the environmental impact identified in the previous subsection.

Mitigation monitoring identifies who is responsible for insuring that the mitigation measures will be implemented and over what time period.

4.014 Residual Impact

This subsection will describe the residual impact after mitigation measures are implemented. If impacts cannot be avoided or reduced to an "insignificant" level the environmental impact will be deemed an adverse unavoidable impact.

SECTION 2 • PROJECT DESCRIPTION

2.01 PROJECT

The term "project" shall refer to the Kerman General Plan, a single document that contains six of the seven State-mandated general plan elements - land use, circulation, conservation, open space, noise, and safety. The housing element, which is the seventh State-mandated element, has already been prepared by the City. The conservation and open space elements have been combined into one element, entitled Conservation, Open Space, Parks and Recreation Element.

An abbreviated description of each of the elements contained in the General Plan is described below. These elements constitute Part 1 of this document.

Land Use Element - designates the general distribution and location of land for residential, commercial, industrial, open space, including agriculture, natural resources, recreation, public buildings, and liquid waste disposal facilities, and other categories of public and private uses of land. The element also specifies standards of population density and building intensity.

Circulation Element - delineates the general location and extent of existing and proposed major roadways, including arterials and collectors; transportation routes, including pedestrian trails and bike routes; and other public utilities and facilities.

Conservation, Open Space, Parks and Recreation Element - provides for the conservation, development, and utilization of natural resources, including water, soils, and other natural

resources. Also, seeks to manage open space for outdoor recreation, including parks, recreational facilities, and scenic highway corridors; and for protection of the public's health and safety, including regulation of open space because of flood, earthquake or hazardous soil conditions.

Safety Element provides for the protection of the community from unreasonable risks associated with earthquakes, flooding, subsidence, and fires.

Noise Element - identifies and appraises noise problems in the community. It includes implementation measures and possible solutions that address existing and foreseeable noise problems.

The above elements can be organized into one of three general categories. Category one, includes the elements that guide the physical development of Kerman, including the location, mixture, density and intensity of various land uses. Included in this category are the land use and the conservation, open space and parks and recreation elements.

Category two, includes the element that supports Kerman's land use system - the circulation element.

Category three, includes elements that contain policies or programs that protect or enhance the public's health, safety or welfare. They include the noise and safety elements. The safety element insures that property and the public will not be exposed to unreasonable risks related to seismic, geologic, flooding, and fire hazards. The noise element contains policies and standards that guide the location and site and building design of land uses that may be exposed to excessive noise.

2.02 LOCATION

The Kerman planning area is located in western Fresno County in the southern portion of the San Joaquin Valley. The urbanized portion of Kerman is located around the intersection of State Highways 145 and 180. It is 17 miles south of the City of Madera and 15 miles west of Fresno. (see Exhibit No. 1, Chapter 1, Part 1 of document)

2.03 PLANNING AREA

The planning area for the Kerman General Plan encompasses lands within Kerman's sphere of influence (SOI). The SOI contains about 3.73 square miles of which, 1.91 square miles are contained within Kerman's city limits. The planning area includes the urbanized portions of Kerman and surrounding agriculture and rural residential lots. (see Exhibit No. 2, Chapter 1, Part 1 of document)

2.04 PLANNING PERIOD

The Kerman General Plan is designed to guide development, manage resources, protect the physical and human environment and promote economic activity in the Kerman planning area to the year 2013. This 20-year plan will provide long-term policies that will guide day-to-day planning and capital improvement decisions.

2.05 PROJECT OBJECTIVES

The Kerman General Plan is intended to meet the following objectives.

- recognize the changing conditions and trends in the planning area and market place and make appropriate amendments to the General Plan;

- project Kerman's future growth and make provisions for this growth through the General Plan;
- provide for a greater variety of housing choices and shopping opportunities;
- present a land use pattern that avoids land use conflicts;
- insure that there are adequate public facilities to serve Kerman in the future;
- insure that Kerman's infrastructure system can effectively serve the land use framework;
- promote economic development and enhanced employment opportunities in Kerman by designating sufficient land for industrial uses, retail stores, and office parks;
- recognize past land use approval actions and adopted land use policies;
- create a unique and attractive city by investing in projects that will enhance Kerman's appearance and marketability;
- provide a safe and pleasant environment and enhance property values throughout the community by avoiding and eliminating land use conflicts;
- enhance the character of Kerman by creating an improved and revitalized downtown;
- promote increased sales tax revenue in Kerman by providing sufficient land at appropriate locations for shopping centers; and
- promote increased property tax revenue in Kerman by facilitating development, which is consistent with the General Plan, through the use of various redevelopment strategies.

2.06 PROJECT INFORMATION

Population

It is projected that by the year 2013 Kerman's population will reach between 12851 and 17931 persons; between 9014 and 10648 by the year 2003. These population projections were based on annual growth rates of 3.61 and 5.35 percent, respectively.

Land Demand

The demand for land for future urban uses is primarily based on population projections for Kerman. Some land requirements, however, are not based on Kerman's population but on Kerman's secondary market population, which includes persons living in Mendota, Tranquility and San Joaquin. As an example, Kerman's future land use needs for retail commercial uses may exceed the needs of its residents because the Kerman retail market not only serves Kerman but surrounding communities.

The planning area for the City of Kerman encompasses about 2387 acres. In 1993, only about 649 acres, or 27 percent of the planning area, was occupied by urban uses or support facilities, such as the sewage treatment plant. The balance of the land was vacant or utilized for agriculture, road and railroad rights-of-way, and rural residential lots.

The General Plan projects that by 2013, between 544 and 955 acres of additional land will become urbanized, bringing the urban total to between 1193 and 1602 acres, or between 50 and 67 percent of the planning area. The higher urban total acreage could support as many as 11608 additional persons in Kerman by 2013.

SECTION 3 • ENVIRONMENTAL SETTING

The description of the environmental setting for the planning area is contained in Part 2 of this document. This section provides information on the human and physical environments, resources and identifies lands in the planning area that at risk of upset due to flooding, earthquakes or noise.

SECTION 4 • ENVIRONMENTAL IMPACT ANALYSIS

The environmental impacts discussed in the DEIR were identified through the Notice of Preparation (NOP) and initial environmental study process. Each factor discussed in this part of the DEIR will be addressed under three subheadings - environmental impact analysis, mitigation measures and monitoring, and residual impacts. Existing conditions for each environmental issue are contained in Part 2 of this document.

RISK OF UPSET

Risk of upset involves environmental hazards that can potentially cause loss of property or life, including forces like fire, earthquakes, and flooding, or nuisances that can disrupt the physical or mental well-being of persons, such as noise. These types of risk are discussed in Kerman's Safety and Noise Elements. Contained in these elements are policies and action programs that will reduce the risk associated with these hazards and nuisances.

4.01 SEISMIC HAZARDS

In 1973, five counties in the southern San Joaquin Valley jointly completed the *Five County Seismic Safety Element*. Fresno County was one of the five counties. The Element identified existing seismic and geologic hazards within Fresno County.

Seismic hazards, such as earthquakes, can cause loss of human life and property damage, disrupt the local economy, and undermine

the fiscal strength of a community. Geologic hazards, including settlement and liquefaction, can cause building and infrastructure damage.

4.011 Existing Conditions

Part 2 of this document provides a description of seismic conditions in the planning area.

4.012 Environmental Impacts

The planning area is situated in a region where strong ground shaking can occur. Examples have been the 1983 Coalinga earthquake, which had a Richter scale measurement of 6.7, and the 1985 Avenal earthquake, which had a 5.5Rs.

Impacts resulting from a future earthquake could include damage to buildings, infrastructure, and secondary impacts, such as the financial implications on Kerman for repair and/or replacement of infrastructure.

4.013 Mitigation Measures and Monitoring

Policies and action programs contained in the Kerman Safety Element will reduce the aforementioned environmental impact to an "insignificant" level. The Element's policy regarding seismic safety states: "The City shall insure that all new and rehabilitated structures are constructed to meet adequate seismic safety standards." The Element's action programs recommends the following:

1. The City of Kerman shall adopt building code standards for Seismic Zone 2 as described in the Uniform Building Code.
2. The City shall continue the abatement/rehabilitation of unreinforced masonry buildings. The City shall use funding programs contained in the Housing Element to assist qualified low income families in the process of rehabilitating their homes or renting or purchasing new homes.

Mitigation monitoring - The building department, through its inspection program, will insure that new and rehabilitated structures are constructed consistent with the building standards for Seismic Zone 2.

4.014 Residual Impact

Seismic hazards will be reduced to an insignificant level through policies and action programs contained in the Safety Element.

4.02 FLOODING

Flooding can be caused by water spilling over the banks of a watercourse or from water that ponds on streets due to insufficient drainage facilities. The first type of flooding can damage property while the second type is more of a nuisance and generally localized. It can sometimes cause minor property damage.

4.021 Existing Conditions

The Federal Emergency Management Agency (FEMA), which is the federal agency charged with mapping flood prone areas throughout the United States, does not indicate that Kerman is subject to flooding - subject to a 100-year flood. However, there are areas within Kerman that are subject to localized flooding, primarily resulting from insufficient storm drainage facilities.

4.022 Environmental Impact

Portions of the planning area are subject to periodic flooding, which is localized and results from inadequate storm drainage facilities, such as under-sized storm drain pipes or pumps. This type of flooding rarely results in any property damage.

4.023 Mitigation Measures and Monitoring

Policies and action programs contained in the Kerman Land Use Element will reduce the aforementioned environmental impact to

an "insignificant" level. The Element's policy relating to the mitigation of flooding states: "Kerman shall install water, sewer and storm drainage improvements that correct existing deficiencies in each infrastructure system and that meet the demands of future development as provided for under the Land Use Element." The Element's action programs recommend the following:

1. Kerman's water, sewer, and storm drainage master plans shall be reviewed in order to insure that they can properly and efficiently serve future development provided for by the Land Use Element.
2. Kerman's water, sewer, and storm drainage development fees shall be reviewed on an annual basis. This review should focus on the relationship between the amount of fees being collected for each system and the future capital needs of each system based on development trends in Kerman.

Mitigation monitoring - The City Engineer will review each master plan to insure that it can effectively serve the development provided for under the Land Use Element. Further, the City Engineer will annually review the water, sewer, and storm drainage development fees with the City Council to insure that the capital needs of each system are properly funded by the development fee for each system.

4.024 Residual Impact

Flooding hazards have been reduced to an insignificant level through policies and action programs contained in the Land Use Element.

4.03 NOISE

Noise is defined as unwanted or excessive sound. Sound is a variation in air pressure that the human ear can detect. This pressure is measured within the human hearing range as decibels on the A scale (dBA). As the pressure of sound waves increases the sound appears louder and the dBA level increases logarithmically.

On the average, a person will describe an activity with a dBA ranging from 85 to 105 as "very loud" while a noise level of 20 to 40 dBA will be described as "faint". A dBA of 130 has been identified as the threshold of pain; 0 dBA as the threshold of audibility.

When measuring highway traffic noise, the State Office of Noise Control, uses cumulative noise exposure information in terms of day-night average noise level L (dn) contour values. A 60 dB (L10) noise contour along a highway would represent a 60 decibel reading that is occurring ten percent of the time when measurements were being conducted.

Persons that are living, working or staying in buildings that are not properly insulated or designed to attenuate noise can be adversely impacted by noise emanating from roadway-related noise. These persons can suffer from loss of sleep, stress or interference with speech, recreation, and concentration.

Real estate values can also be adversely impacted by noise. This impact can lead to a blighted condition because persons may be unwilling to invest, maintain or upgrade property that is noise-impacted.

4.031 Existing Conditions

Section 2 of this document provides a description of noise conditions in the planning area.

4.032 Environmental Impact

The most significant levels of noise in Kerman are generated by traffic on Madera Avenue and Whitesbridge Road. Madera is especially noisy because of its high daily traffic count, 18,000 average daily trips per day, and its large percentage of trucks, 19 percent of total traffic volume. Stationary sources that generate significant levels of noise, although short in duration, include Central Valley Concrete, Helena Chemical and industrial plants located in the Kerman industrial park.

Noise impacts become significant when noise sensitive land uses, such as residential dwellings, schools, parks and convalescent homes, are located in close proximity to heavily traveled roadways or stationary noise sources. In Kerman only a few noise sensitive land uses are positioned near these types of noise sources. Kerckhoff Park is located about 250 feet west of the centerline of Madera Avenue and numerous apartments and a mobile home park are located 200 feet east of Madera. About 10 residential dwellings are within 150 feet of Central Valley Concrete while within about 500 feet of Helena Chemical, eight residential dwelling and a church are situated.

The distance between the centerline of Madera Avenue and the aforementioned uses attenuates the noise generated by traffic on this roadway. In the Noise Element, Brown-Buntin have calculated that the 65 dB noise contour is 139 feet from the centerline of Madera Avenue. Factoring the noise attenuation value provided by the exterior walls of an apartment unit or mobile home, which ranges from 20 to 25 dB when windows are closed (12 to 15 dB when windows are open), the interior noise level in these dwelling units drops to 40 to 45 dB. This interior noise level is consistent with the policy in the Noise Element that defines appropriate noise levels for interior residential spaces.

The maximum noise levels measured by Brown-Buntin at the Central Valley Concrete plant at distances ranging from 125 to 175 feet were 65 to 75 dB. These noise levels occur between the hours of 6:30 to 11:00 a.m., five days a week. These noise measurements were taken from residential lots north of the plant. Brown-Buntin has indicated that these noise levels are in excess of the noise level standards contained in the Noise Element.

Maximum noise levels generated by Helena Chemical were between 50 and 52 dB. These measurements were conducted from California Avenue and Vineland Avenue. Given that the nearest residential dwelling is about 150 feet east of the plant, and because noise levels drop off 5 dB every time the distance between the noise source and receiver is doubled, it is estimated that the maximum noise level at the residential lot nearest Helena Chemical is 47 dB.

This exterior noise level is consistent with the policy in the Noise Element that defines appropriate noise levels for exterior residential spaces.

The Kerman General Plan and Noise

The Kerman General Plan attempts to avoid noise conflicts by insuring that noise sensitive land uses are not located near Madera Avenue, Whitesbridge Road, or noise-generating land uses, such as industrial or transportation uses. The General Plan has designated most of the parcels that front onto Madera or Whitesbridge for office, commercial, or industrial uses. These types of land uses are not as sensitive to noise as residential uses. The General Plan does, however, designate some parcels that front onto the south side of Whitesbridge east of Madera Avenue as multi-family residential. Persons living in these multi-family complexes could experience some noise-related problems if they lived adjacent to Whitesbridge.

The General Plan has avoided the potential conflict between noise-generating land uses and noise sensitive land uses by insuring that these types of land uses are spatially separated. For example, the General Plan places service commercial and industrial uses south of the California Avenue/Southern Pacific Railroad alignment while it places noise-sensitive uses - residences, parks, and schools - north of this alignment.

4.033 Mitigation Measures and Monitoring

Noise from transportation routes can be mitigated in one of three ways: reduce the noise at the source by improving pavement, reducing average daily traffic counts; reduce the noise at the receiving point by installing noise attenuating sound walls, landscaping, earthen berms, or insulating and designing buildings so that noise levels are reduced in the interior; or increase the distance between the noise source and the receiving point by establishing building setback distances from a roadway.

Policies and action programs contained in the Kerman Land Use and Noise Elements will reduce the aforementioned environmental

impact to an "insignificant" level. The Land Use Element contains the following policies and action programs that will mitigate noise impacts.

POLICY: Preserve and enhance Kerman's visual appearance and living environment.

ACTIONS:

a. Require that new subdivisions be required to install and maintain landscaping, irrigation, and wall improvements along collector and arterial roadway frontages.

POLICY: Land uses in Kerman shall be arranged in a manner that avoids conflicts between the uses.

ACTIONS:

a. Uses that conflict with each other shall be separated by buffer zones or demarcation lines (streets, railroads, canals, etc. to separate uses of different characteristics).

POLICY: Service commercial uses shall be directed to locate south of California Avenue, near the industrial park and the Southern Pacific Railroad.

ACTIONS:

a. Adoption of the Land Use Element will implement this policy.

b. Amend the zoning ordinance to require service commercial uses in the general commercial zone only with a conditional use permit.

POLICY: Land north of Whitesbridge Avenue east of Madera Avenue shall be designated for service commercial uses with the special provision that it will be used for only auto, truck, boat, mobile home, motorcycle dealerships.

ACTION:

- a. Adoption of the Land Use Element will implement this policy.

POLICY: Ensure that adequate land is available for service commercial uses.

ACTION:

- a. Adoption of the Land Use Element will implement this policy. A portion of Kerman's industrial park has been designated for service commercial uses.

POLICY: New industrial uses shall be located south of California Avenue.

ACTION:

- a. Adoption of the Land Use Element will implement this policy.

The Noise Element recommends the following:

POLICY: New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected future levels of noise from transportation noise sources which exceed 60 dB Ldn in outdoor activity areas or 45 dB Ldn in interior spaces.

POLICY: New development of noise-sensitive land uses shall not be permitted where the noise level from existing stationary noise sources exceeds the noise level standards of Table III, contained in the Noise Element.

POLICY: Noise created by new proposed stationary noise sources or existing stationary noise sources which undergo modifications that may increase noise levels shall be mitigated so as not to exceed the noise level standards of Table III on lands designated for noise-sensitive uses. This policy does not apply to noise

levels associated with agricultural operations.

ACTIONS:

- a. The City shall review new public and private development proposals to determine conformance with the policies of this Noise Element.

- b. Where the development of a project may result in land uses being exposed to existing or projected future noise levels exceeding the levels specified by the policies of the Noise Element, the City shall require an acoustical analysis early in the review process so that noise mitigation may be included in the project design. For development not subject to environmental review, the requirements for an acoustical analysis shall be implemented prior to the issuance of a building permit.

- c. The City shall develop and employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the development review and building permit process.

- d. The City shall develop and employ procedures to monitor compliance with the policies of the Noise Element after completion of projects where noise mitigation measures have been required.

- e. The City shall enforce the State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code (UBC) concerning interior noise exposure for multi-family housing, hotels and motels.

Mitigation monitoring - The planning director, through Kerman's site plan and conditional review process, and the building official, through the building permit process, shall insure that noise sensitive development shall be designed to minimize noise impacts and shall be constructed in accordance with noise attenuating measures contained in the Uniform Building Code.

4.034 Residual Impact

The policies and action programs contained in Kerman's Land Use and Noise Elements will reduce potential noise impacts that could be caused by the implementation of the General Plan to an "insignificant" level.

RESOURCES

The Kerman General Plan can potentially have an adverse impact on the resources of the planning area, including biotic, cultural, scenic and agricultural.

4.04 AGRICULTURAL RESOURCES

Agricultural land is a renewable natural resource. Consumption of this resource is considered to be an irreversible environmental impact. Conversion of prime agricultural land to non-agricultural uses or impairment of its productivity is considered a significant environmental impact by CEQA.

The California Department of Resource Conservation defines prime farmland as land having the best combination of soil quality, growing season, and water quality. Within the planning area, prime farmland would be those lands having soils with a soil capability class of I or II, a Storie Index greater than 85, and a permanent source of irrigation water. Unique farmland has special combinations of soil quality, location, growing season and water supply needed to produce specific high value crops. In 1992, Kerman had 1145 acres of agricultural land within its sphere of influence; 85 percent of that acreage, or 973 acres, was prime agricultural land.

A recent five-county study (Fresno, Stanislaus, Merced, Madera, and Kings) released by the State Department of Conservation indicated that between 1984 and 1988, Fresno County lost 3,898 acres to urbanization; about 780 acres annually. A cursory review

of Kerman's development activity since 1970 indicated that about 10 acres per year of farmland was urbanized.

4.041 Existing Conditions

Part 2 of this document provides a description of agricultural resources in the planning area.

4.042 Environmental Impacts

By the year 2013, the General Plan shows that between 390 and 831 acres of agricultural land will be converted to urban uses. These acreages vary because they are based on different 2013 population estimates, low population estimate, 12,851, and high population estimate, 17,931. Most of the agricultural land conversion will result from residential, school/park and industrial development.

On an annual basis, between 20 and 40 acres of agricultural land in Kerman will be converted to urban uses. This represents between two and five percent of the land in Fresno County that is converted from agriculture to urban uses, based on the study conducted by the State Department of Conservation.

A secondary effect of converting 20 to 40 acres of agricultural land to urban uses is the conflicts that are caused between existing agricultural operations and the recently created urban uses. Encroachment of urban uses into an area that is being intensively farmed could prevent the farmer from carrying out certain farm management practices (e.g. pesticide application). Farming practices that generate large amounts of dust, high levels of noise, or offensive odors may have to be reduced or curtailed as a result of pressures exerted by adjacent residents or by State chemical application requirements. In addition, farming operations could also experience additional vandalism, theft and nuisance activities from neighboring residents.

Urbanization of agricultural land can also have an economic impact on the local economy because land taken out of production reduces the amount of money that flows into the local economy from agriculture. The report Risks, Challenges and Opportunities:

Agriculture, Resources and Growth in a Changing Central Valley, prepared by the American Farmland Trust, indicated that for every one dollar of farm sales four dollars of farm-related economic activity occurs.

4.043 Mitigation Measures and Monitoring

Policies and action programs contained in the Land Use Element will mitigate the General Plan's impact on agricultural land but not to an insignificant level. These policies and action programs are as follows:

POLICY: Kerman will ensure that its primary economic base (agriculture) is protected.

ACTION:

- a. Require the Planning Commission and City Council to make a finding when approving new subdivisions that this development is within 1/8 mile of existing urban development.

POLICY: Encourage Fresno County to apply large-lot agricultural zoning (20-acre minimum) to land within Kerman's Sphere of Influence.

ACTION:

- a. The City of Kerman shall oppose any county development within its Sphere of Influence that creates parcels of land smaller than 20 acres.

POLICY: Increase overall residential densities in the City of Kerman so as to require less urbanization of surrounding agricultural lands.

ACTION:

- a. The Land Use Element and Zoning Ordinance provide for increased residential densities within the planning area.

POLICY: Urban uses, to the best extent possible, should be separated from agricultural uses by streets, railroads, canals or similar man-made or natural barriers.

ACTION:

- a. Adoption of the Land Use Element will implement this policy.

Policies and action programs contained in the Conservation, Open Space, Park and Recreation Element also will mitigate the General Plan's impact on agricultural land. These policies and action programs are as follows:

POLICY: Preserve and protect agricultural lands as a means for providing open space and for the managed production of resources.

ACTION:

- a. Areas of non-prime agricultural soils should be designated for residential and commercial development.
- b. The Planning Department shall conduct an annual review of cancelled Williamson Act contracts and development proposals on agricultural land within the City Limits and Sphere of Influence.

POLICY: Develop buffers and transition areas between urban uses and agricultural land to reduce incompatibility issues that are associated with cultivation, pest control and harvesting of crops.

ACTION:

- a. Adoption of the Land Use Element will provide the implementaiton of this policy.

POLICY: Encourage owners of agricultural parcels that are not within the 20-year growth pattern of Kerman's Land Use Element to enter the agricultural preserve program.

ACTION:

- a. Adoption of the Land Use Element will provide the implementation of this policy.

POLICY: Promote infilling and increase overall residential densities in the City of Kerman so as to require less urbanization of surrounding agricultural lands.

ACTION:

- a. Adoption of the Land Use Element will provide the implementation of this policy.

POLICY: Establish and maintain "hard edges" around Kerman that define where urbanization stops and agricultural open space begins.

ACTION:

- a. Where appropriate, the City will discourage zoning requests in the Sphere of Influence and surrounding County areas to permit further parcelization for development of large lot residential purposes ie; ranchettes.

Mitigation Monitoring - The City Planner and City Attorney will be responsible for insuring that future land development projects that involve agricultural land will be consistent with the policies and actions of the Land Use and Conservation, Open Space, Park and Recreation elements.

4.044 Residual Impact

Conversion of prime agricultural land to non-agricultural uses must be considered a significant unavoidable impact. The only means of avoiding this impact would be to prohibit the conversion of agricultural land to urban uses. This option would not allow Kerman to experience any long-term population growth nor would it allow for additional industrial development.

The adoption of the above mitigation measures will not reduce the project's impact on agricultural resources to an "insignificant" level. Therefore, the General Plan will have an adverse irreversible impact on agricultural resources in the Kerman planning area.

4.05 SCENIC RESOURCES

The scenic qualities of a community are composed of a mixture of natural and man-made features. The value or importance of these features to the public is dependent upon the visual quality of the view. The rating of a view is a subjective process, however, the U.S. Forest Service, with a modification by the Consultant, has devised a rating system for classifying views in the planning area. To identify significant scenic resources and visually blighted areas within the planning area, the Consultant has utilized this rating system to classify views along travel corridors and from sites that contain locally significant views.

The image that natural and man-made features of a community convey to people is important from an intrinsic and economic perspective. The pleasing appearance of a community can encourage residents to maintain and invest in their community. This investment incentive can also apply to out-of-town visitors. Conversely, a community that is not maintained, ill-planned, or poorly designed, can discourage persons from living, moving to or investing in the community. This can have adverse economic implications for a community.

4.051 Existing Conditions

Part 2 of this document provides a description of scenic resources in the planning area.

4.052 Environmental Impacts

Implementation of the General Plan could have a significant adverse impact on the scenic qualities of natural and man-made features in the planning area. As residential, commercial and

industrial urbanization occurs, the amount of man-made improvements will begin to dominate what was once open space - agricultural field or open land. Persons who once had a view of an open field or orchard may experience a loss of this resource as development replaces these open space uses. Specific areas where the Land Use Element proposes significant urbanization of open space includes land located north of California Avenue, south of Whitesbridge Road, west of Goldenrod and east of Siskiyou Avenue.

Urbanization can also have an adverse impact on the scenic qualities of the man-made features of the community. An apartment complex that is located in an existing single family neighborhood and improperly designed can degrade the continuity and appearance of the neighborhood. A service commercial or industrial use that is poorly landscaped or designed and located along one of Kerman's entryways can present a poor visual image of the community.

4.053 Mitigation Measures and Monitoring

The policies and action programs contained in the Land Use, Circulation, and Conservation, Open Space, Park and Recreation elements will mitigate the project's impact on the scenic resources in the planning area.

The Land Use Element also contains numerous policies and action programs that insure new development will not adversely affect the scenic qualities of Kerman's urbanized areas. This Element will promote development that is aesthetically pleasing and well-maintained. Applicable policies and action programs are as follows:

POLICY: Promote a clean, well-maintained community.

ACTIONS:

a. The Planning Department shall periodically review improvement standards contained in the zoning and subdivision

ordinances. Standards that should be reviewed include landscaping, parking and signs.

b. The City shall actively enforcement the city's vehicle abatement program.

c. The Building Department shall actively enforce the State Housing Code to insure that unsafe, dilapidated residential structures are rehabilitated or demolished.

d. The Planning Department shall increase its enforcement of the sign ordinance by periodically informing persons with illegal signs that these signs must be removed.

e. The City shall investigate purchasing and installing trash receptacles along Madera and Whitesbridge Avenues.

f. The Planning Department shall insure that commercial uses do not operate in residential neighborhoods unless the operator of the commercial use has secured a home occupation permit.

POLICY: Visually enhance Kerman's four major entryways.

ACTION:

The City shall beautify entryways into Kerman through installation of landscaping, sign treatment, landscaped medians, and lighting.

POLICY: Encourage high quality site, architectural, and landscape design in new private and public development.

ACTIONS:

a. Kerman shall amend its zoning ordinance to add new development standards that are specific to design districts identified on the land use/circulation map.

b. Continue the use of the site plan review process to ensure that new or renovated projects conform to the development standards

contained in the zoning ordinance.

POLICY: Preserve and enhance Kerman's small-town character.

ACTIONS:

- a. Adopt specific development standards for the design district that encompasses the historic Kerman townsite, which extends along Madera Avenue from California Avenue to Kearney Boulevard. The standards shall focus on special setback, streetscape, sign and parking requirements.
- b. Promote a mixed-use development at the southwest corner of Madera Avenue and Kearney Boulevard that exhibits a historical downtown character.
- c. In addition to the Harvest Festival, Kerman should explore the idea of holding other public activities near Kerckhoff Park, such as a farmer's market, sidewalk sale, or ethnic food faire.

POLICY: Preserve and enhance Kerman's visual appearance and living environment.

ACTIONS:

- a. Require that new subdivisions be required to install and maintain landscaping, irrigation, and wall improvements along collector and arterial roadway frontages.
- b. Kerman shall investigate the feasibility of constructing and maintaining tree-lined medians along Madera Avenue, Kearney Boulevard, Whitesbridge Avenue, C Street or any other roadway that the City Council may deem appropriate.
- c. This policy will be implemented through the adoption of the Noise Element.

POLICY: Develop and maintain a strong community edge - where urban and agricultural uses interface.

ACTIONS:

- a. Kerman shall forward a recommendation of denial to Fresno County if large-lot ranchette subdivisions are proposed for lands within its sphere of influence.
- b. Kerman shall not initiate annexations that create peninsulas or islands, or which require inefficient extensions of infrastructure.

POLICY: Preserve and enhance natural and rural features in Kerman such as stands of mature trees, and agricultural crops and trees.

ACTIONS:

- a. Require developers to integrate existing mature trees into their projects.
- b. Explore the feasibility of using rights-of-way for use as parkways and trails.

POLICY: Preserve the low density, single-family character of Kerman.

ACTIONS:

- a. This policy will be accomplished through the implementation of the Land Use Element.
- b. Designate older, established single family blocks for low density residential uses.

Mitigation Monitoring - Many of the above mitigation measures, which are in the form of action programs, will be implemented by the Kerman site plan review committee, the subdivision review committee and Kerman's capital improvement program.

The site plan review committee will insure that new apartment, commercial and industrial developments conform to development standards contained in the zoning ordinance, are consistent with

the new design standards of the design districts provided for in the Land Use Element, and are in concert with General Plan policies.

The Kerman subdivision review committee will insure that new subdivisions are constructed consistent with development standards contained in the zoning ordinance and comply with the design recommendations stated in the General Plan, including wall treatments, installed and maintained perimeter landscaping, and street trees.

Through Kerman's capital expenditure program, the city council will instruct the City Engineer to oversee the process of constructing landscaped medians on streets identified in the General Plan. This process will include design, bid, award of bid and installation.

4.054 Residual Impacts

Implementation of the above action programs will reduce the General Plan's impact on scenic resources of Kerman to an insignificant level.

4.06 CULTURAL RESOURCES

The California Environmental Quality Act (CEQA) of 1970 and subsequent legislation including the Deddah Bill (AB 952) require the identification and evaluation of cultural resources, including prehistoric and historic sites for proposed projects. In this case, the proposed General Plan is general in nature and at this time specific development plans are not being proposed. Therefore, this DEIR can not evaluate specific impacts on cultural resources within the planning area. Information regarding cultural resources was provided by the California Archaeological Inventory Southern San Joaquin Valley Information Center at California State University at Bakersfield. The Center indicated that no known archaeological sites existed in the planning area.

4.061 Existing Conditions

Part 2 of this document provides a description of cultural resources in the planning area.

4.062 Environmental Impacts

The proposed General Plan does not allow for the construction of any specific development. However, it does encourage urban development in the planning area that under the current general plan would have remained in agriculture, which would have less of an impact on cultural resources. Urban development and its attendant improvements, such as streets, infrastructure, building site improvements, and utility lines, can destroy or disturb historic or prehistoric resources. These resources have historic and educational value. For Native Americans, prehistoric resources may have religious and spiritual values.

4.063 Mitigation Measures and Monitoring

Since the proposed General Plan is not intended to allow for the actual construction of any specific development project, the DEIR cannot recommend specific mitigation measures that will reduce the General Plan's impact on archaeological or historic sites. However, some general mitigation measures will be recommended to aid in the environmental review process for future projects that are located in the planning area.

The mitigation of impacts to cultural resources is dependent on the uniqueness of each individual site. The Deddah Bill, AB 952, provides specific criteria in the determination of the "unique" qualities of a site. In order to be considered a "unique" archaeological resource, an artifact, object, or site must meet the following criteria:

1. Contains information needed to answer important scientific research questions and that the public has an interest in that information;

2. Has a special and particular quality such as oldest, best example, largest, or last surviving example of its kind;
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person;
4. Is at least 100 years old and possesses substantial integrity.

Cultural resources which meet one of these criteria, and will be disturbed or destroyed by the proposed project, is considered to be a significant adverse impact. Under the law, any resource not meeting this criteria may simply be recorded and no further consideration is required.

The California Environmental Quality Act (CEQA) requires the protection of any "unique" cultural resource. The best alternative is to seek a way of avoiding any damage to the resource. If this is not feasible, there are alternative methods allowed by law. Preservation of the site is the preferred approach to avoid damage to historic or prehistoric resources, but avoiding damage can be accomplished in a variety of ways, including:

1. Designing the development to circumvent cultural resources;
2. Planning open space or parks to incorporate archaeological sites;
3. Deeding the archaeological site into permanent conservation easements;
4. "Capping" or covering the site with a layer of soil and some type of impervious material before constructing on top of it. The type of construction allowed in this case is limited to parking facilities, tennis courts or some similar facility.

If a site cannot be preserved in place, mitigative excavation is required. Only sections of an archaeological site that are damaged or destroyed by a proposed project need to be excavated. CEQA has placed special rules limiting the mitigation requirements of

archaeological resources. Due to the high cost of excavations, the project applicant is limited in the amount of money that is required to be spent on excavation. For instance, the limit on commercial or industrial projects is one-half of one percent of the projected cost of excavation.

4.064 Residual Impacts

Adoption of the above mitigation measures will reduce the General Plan's impact on cultural resources to an "insignificant" level.

4.07 BIOTIC RESOURCES

Biotic resources are considered to be a renewable natural resource. Consumption of this resource is considered to be an irreversible environmental impact. Should certain species of plant or animals become extinct or have their numbers so reduced that they can not effectively increase their populations, the resource then becomes a nonrenewable resource.

4.071 Existing Conditions

Part 2 of this document provides a description of biotic resources in the planning area. In addition, the Consultant has performed a biological assessment of natural habitat areas adjacent to the urbanized portions of the planning area. Furthermore, this assessment also surveyed the literature and completed a preliminary field assessment to determine if sensitive plant or animal species existed within the planning area. The biological assessment concluded that rare and endangered species or unique wildlife habitat were not present in the planning area.

4.072 Environmental Impacts

The General Plan will not have an adverse impact on biotic resources. Development that will be provided for by the Plan will not encroach onto lands that exist as native habitat or onto lands that support rare and endangered species.

4.073 Mitigation Measures and Monitoring

Mitigation measures are not required for impacts that are deemed insignificant.

4.074 Residual Impacts

The project will not have a significant impact on biotic resources within the planning area.

PHYSICAL IMPACTS

Physical impacts involves environmental impacts that adversely affect the physical environment, such as ground and surface waters, and air.

4.08 WATER QUALITY

Urban development and its related activities, including road building, grading, and infrastructure installation, can increase the amount of soil sediment, heavy metals, plant nutrients (nitrates and phosphates), and organic chemicals (oil, detergents, pesticides) that enters surface waters. These materials generally enter surface waters during periods of precipitation when urban storm water is diverted to waterways or ponds via storm drainage lines.

SURFACE WATER

4.081 Surface Water - Existing Conditions

Part 2 of this document provides a description of water quality conditions in the Kerman planning area.

4.082 Surface Water - Environmental Impacts

Implementation of the General Plan will not adversely affect the

quality of surface water because year-round water courses do not traverse the planning area. In addition, urban storm water runoff is diverted into Kerman's detention or retention basins. Any contaminants contained in this runoff is eventually retained in the soil profile that underlies each basin.

Irrigation ditches traverse the planning area, however, urban runoff is precluded from being channeled into these water courses by the Fresno Irrigation District.

4.083 Surface Water - Mitigation Measures and Monitoring

Mitigation measures are not required for impacts that are deemed insignificant under CEQA.

4.084 Surface Water - Residual Impact

The General Plan will not a significant impact on the water quality of surface water in the planning area.

GROUND WATER

4.085 Ground Water - Existing Conditions

Part 2 of this document provides a description of the ground water quality conditions in the Kerman planning area.

4.086 Ground Water - Environmental Impacts

The potential of urban development contaminating ground water in the planning area is remote. Depth to groundwater averages from 80 to 100 feet and Kerman's four wells are presently drawing water from 300 to 500 feet. Water that is contaminated as a result of urban development is generally associated with urban storm runoff from streets, yards, parking lots and other urban improvements. This contaminated water is currently diverted to Kerman's network of retention and detention ponds. Once in the ponds, the water either percolates into the ground or it evaporates.

As water percolates into the ground it carries with it contaminants. Most, if not all, of these contaminants "bind" with various soil particles and organic matter as it moves toward the underlying aquifer. Because the distance to the aquifer is 80 to 100 feet in Kerman, the possibility of contaminated water reaching the aquifer is slight.

Industrial development can potentially contaminate the planning area's ground water. Some waters emanating from a plant site may be stored on-site, typically in a lined retention pond. Should this pond leak, because the lining breaks, the contaminants in the pond could percolate into the ground water system thereby polluting the aquifer and endangering Kerman's drinking water.

4.087 Ground Water - Mitigation Measures and Monitoring

1. All new development in Kerman will be required to connect to Kerman's storm drainage system. This requirement is consistent with policies contained in the Land Use Element. Policies and action programs that refer to storm drainage are as follows:

POLICY: Kerman shall install water, sewer, and storm drainage improvements that correct existing infrastructure deficiencies and meet the demand of future growth.

ACTIONS:

Kerman's water, sewer, and storm drainage master plans shall be reviewed in order to insure that they can properly and efficiently serve future development provided for by the Land Use Element.

Kerman's water, sewer, and storm drainage development fees shall be reviewed on an annual basis. This review should focus on the relationship between the amount of fees being collected for each system and the future capital needs of each system based on development trends in Kerman.

Mitigation monitoring - The City will insure that public improvements associated with development are consistent with the

above action programs. Further, the City shall periodically review its development impact fees to insure that its infrastructure system is being properly funded. This review of public improvements and development impact fees will be on-going throughout the planning period. The City Manager and the City Engineer shall be responsible for insuring that the review of the infrastructure system and fees takes place

2. All on-site detention ponds associated with industrial development shall be designed consistent with the Regional Water Quality Control Board's guidelines for these types of facilities.

Mitigation monitoring - The City Engineer, through the city's site plan review process, shall insure that the design of the retention ponds are consistent with the standards of Regional Water Quality Control Board.

4.087 Ground Water - Residual Impact

With the implementation of the above mitigation measures, the General Plan will not have a significant impact on the quality of planning area's ground water system.

4.09 AIR QUALITY

A decline in the Valley's air quality adversely affects the public's health, especially senior citizens and young children, it reduces agricultural productivity of crops like cotton, alfalfa, citrus and broad-leafed plants and it obstructs the views of the Sierra Nevada and coastal range.

4.091 Existing Conditions

Part 2 of this document provides a description of the current air quality conditions in the San Joaquin Valley air basin.

The State Air Resources Board has calculated base line information

(as of 1987) for the amount of ROG, NO_x, and CO being generated in the air basin. ROG and NO_x are precursors to ozone; a reduction in these emissions will reduce the levels of ozone in the air basin. These emissions are measured in tons per day and include stationary and mobile sources. These estimated baseline numbers enable the Board to gauge the success of its air emission programs.

TABLE 1
Air Emissions, San Joaquin Valley Air Basin-1987

<u>Source</u>	<u>ROG</u>	<u>CO</u>	<u>NO_x</u>
stationary	517 tons/day	227	152
mobile	<u>233</u>	<u>360</u>	<u>1313</u>
total	750	587	1465 tons/day

Notes: ROG = reactive organic gases, CO = carbon monoxide, NO_x = nitrogen oxides.

Source: State Air Resources Board, 1987

The Consultant, using the State's air emissions model, URBEMUS-3, (see Appendix A) has calculated the vehicle-related emissions resulting from the planning area in 1993. Emissions are based on land use acreages existing in 1993. The estimated volumes, when compared to the total volumes generated in the Valley in 1987, show the planning area's volumes to be insignificant. For example, the amount of ROG being generated in 1993 is 429 pounds per day or about .02 percent of what was generated in the air basin by mobile sources in 1987! For CO and NO_x the percentages are 0.3 and .01 percent, respectively.

TABLE 2
Air Emissions, Planning Area-1993

<u>Land Use</u>	<u>ROG</u>	<u>CO</u>	<u>NO_x</u>	<u>PM10</u>	<u>SO_x</u>
single family units	104lbs/dy	1060	88	5	6
apartments	32	325	27	6	2
commercial/office	221	2267	179	178	13
public (schools/parks)	56	529	55	56	4
industrial	<u>15</u>	<u>153</u>	<u>12</u>	<u>10</u>	<u>1</u>
subtotal	428	4334	361	255	26lbs/dy
factor	<u>x .65</u>	<u>x .65</u>	<u>x .65</u>	<u>x .65</u>	<u>x .65</u>
total	278	2817	235	166	173 lbs/dy

Notes: ROG = reactive organic gases, CO = carbon monoxide, NO_x = nitrogen oxides, PM10 = particulate matter, and SO_x = sulfur oxides; .65 factor = discounts counting trips twice

Source: Collins & Associates, 1993

4.092 Environmental Impacts

Long-term impacts

Over the 20-year planning period, implementation of the General Plan will increase the population in the planning area by 11,608 persons, using the high population projection contained in the General Plan. This population growth, and its resulting vehicle trips, will increase air emissions emanating from the planning area. Table 3 estimates the amount of air emissions that will result from the planning area in 2013.

TABLE 3
Air Emissions, Planning Area-2013

<u>Land Use</u>	<u>ROG</u>	<u>CO</u>	<u>NO_x</u>	<u>PM₁₀</u>	<u>SO_x</u>
single family units	210lbs/dy	2589	222	14	16
apartments	60	739	63	4	4
commercial/office	482	5922	507	518	36
public (schools/parks)	61	696	75	72	6
industrial	19	242	19	16	1
subtotal	832	9948	886	624	63lbs/dy
factor	<u>x .65</u>	<u>x .65</u>	<u>x .65</u>	<u>x .65</u>	<u>x .65</u>
total	541	6465	576	405	41 lbs/dy

Notes: ROG = reactive organic gases, CO = carbon monoxide, NO_x = nitrogen oxides, PM₁₀ = particulate matter, and SO_x = sulfur oxides; .65 factor = discounts counting trips twice

Source: Collins & Associates, 1993

Table 3 indicates that air emissions will increase for all air pollutants over the planning period. These additional emissions caused by the implementation of the General Plan will have an adverse impact on the air quality in the San Joaquin air basin. Specifically, these emissions will aggravate the air basin's non-attainment status for ozone and PM 10.

Short-term impacts

Short-term air quality impacts will involve dust that is generated by construction activities. This impact can cause nuisance problems for adjacent residents and farming operations that require their crops to remain free of dust.

4.093 Mitigation Measures and Monitoring

Mitigation of the long-term air quality impacts can not be resolved by any one city or county. It must be accomplished on a regional basis, however, each city must implement policies and action programs that will reduce air emissions on a city by city basis.

Long-term mitigation measures and monitoring

1. The following policies and action programs are contained in the Circulation Element. These measures will mitigate air quality impacts discussed above.

POLICY: A level of service of C will be the desirable minimum service level in Kerman at which highway, arterial and collector segments will operate. A level of service of B will be the desirable minimum service level in Kerman at which intersections will operate.

ACTION:

The City will program into its 5-year capital budget, street improvements that will insure the specified LOS is not exceeded in the city limits. Funds for these street improvement projects will come from gas tax and transportation funds.

POLICY: Land use projects which generate large amounts of traffic shall be precluded from channeling traffic onto local roadways.

ACTION:

The Planning Department shall recommend denial of discretionary land use projects to the Planning Commission and City Council that are inconsistent with this policy.

POLICY: Driveways that intersect with arterials and collectors should be kept to a minimum and, if possible, should be reduced when redevelopment occurs along an arterial roadway.

ACTION:

Through the site plan review process, the Planning and Engineering Departments will discourage development designs that create this condition.

POLICY: Left turn lanes shall be constructed on arterials where they intersect with other arterials or collectors.

ACTION:

The Public Works Department will coordinate with CALTRANS to insure that left turn lanes are constructed along State Highways 145 and 180.

POLICY: New driveways constructed onto arterial roadways shall meet Caltran's construction specifications.

ACTION:

Through Kerman's site plan review process, Caltrans will review all new construction projects along State Highways 145 and 180.

POLICY: Arterials roadways should have sufficient right-of-way to contain four travel lanes, two parking lanes, and a median/turn lane; major collector roadways sufficient right-of-way for two travel lanes, two bike lanes, two parking lanes and a median/turn lane; and minor collectors should have sufficient right-of-way for two travel lanes, two parking lanes, two 6-foot parkways, and two 4 1/2-foot sidewalks.

ACTIONS:

The Public Works Department will coordinate with Caltrans to insure that sufficient right-of-way will be dedicated when development occurs along State Highways 145 and 180.

Major and minor collector roadways will be constructed consistent with street cross-section illustrations contained in Appendix A of

the Circulation Element.

POLICY: All street improvement projects, including widening, closing, or constructing new roadways, will be reviewed by the Planning and Engineering Departments to confirm that the project is consistent with the Circulation Element.

ACTION:

The Planning and Public Works Departments will review street projects to determine consistency with the Circulation Element.

POLICY: The City shall promote all modes of transportation, including mass transit (buses, etc.) bicycle and walking.

ACTION:

Through the 5-year capital budget, the City Council should insure that gasoline tax and transportation funds are spent on all modes of transportation.

POLICY: The City shall prepare a bikepath design plan which lays out a community-wide bicycle lane network. New subdivisions shall provide for the network.

ACTION:

The Engineering and Planning Departments will prepare the bikepath design plan. Funds will come from tax increment, gas tax and transportation funds. Bikepaths will be required to be installed in new subdivisions where required by the bikepath design plan.

2. The following policies and action programs are contained in the Land Use Element. These measures will mitigate air quality impacts discussed above.

POLICY: Kerman shall promote an urban pattern that is compact, contiguous and concentric to the historical Kerman townsite.

ACTION:

This policy will be implemented through adoption of the Land Use Element.

POLICY: The Land Use Element should include two growth boundary lines - 2003 and 2013.

ACTION:

Land outside each growth boundary line shall not be annexed into Kerman until more than 80 percent of the residentially designated land is developed in the city limits or until the boundary line year has been surpassed.

POLICY: Promote a mix of residential dwelling types on the east and west sides of Kerman as well as within each neighborhood.

ACTIONS:

This policy will be implemented through the adoption of the Land Use Element.

Encourage small-scale multiple family development (duplex and triplexes) in new residential neighborhoods. This type of development could be located on corner lots or in cul-de-sacs.

POLICY: New development should be contiguous to existing or approved development.

ACTION:

Require the Planning Commission and City Council to make a finding that new development is within 1/8 mile of existing or approved development when approving subdivisions.

POLICY: Promote infill development in order to reduce the rate at which surrounding agricultural land is urbanized and to provide for a more efficient use of existing infrastructure.

ACTION:

Implement an annexation policy that is based on only annexing land for residential development when at least 80 percent of the residentially designated land in the city limits is developed.

POLICY: Encourage a community land use pattern that will accommodate an efficient infrastructure and public service system.

ACTION:

This policy will be implemented through the adoption of the Land Use Element, as well as conformance to the master water, sewage, and storm drainage plans.

Mitigation monitoring - The City is required to insure that the above policies and action programs contained in the Land Use and Circulation elements are implemented over the planning period.

Short-term mitigation measures and monitoring

Short-term mitigation measures for air emissions resulting from development are as follows:

1. All material excavated or graded should be sufficiently watered to prevent excessive amount of dust. Watering should occur at least twice a day with complete coverage, preferably in the later morning and after work is done for the day.
2. All clearing, grading earth moving or excavation activities shall cease during periods of high winds greater than 20 mph averaged over one hour.
3. All inactive portions of a construction site should be seeded and watered until grass growth is evident.

Mitigation monitoring - The Public Works Director shall insure that the above mitigation measures are implemented during

construction within the planning area.

4.094 Residual Impact

Approval of the the previously listed mitigation measures will reduce the impact of construction projects on short-term air quality to an "insignificant" level.

The adoption of the Land Use and Circulation Elements will implement policies and action plans that will minimize the General Plan's impact on air quality; however, not to an insignificant level. The General Plan will have a significant, adverse impact on the air quality of the San Joaquin Valley.

HUMAN ENVIRONMENT

Impacts in this section of the draft environmental impact report describe the General Plan's potential impact on the human environment, such as services, infrastructure, and land use.

4.10 SCHOOLS

4.101 Existing Conditions

Part 2 of this document describes the existing conditions in the Kerman Unified School District.

During the 1992/931 school year, the School District had 3186 students enrolled. Approximately 59 percent of these students were enrolled in grades K-6, 16 percent in grades 7-8, and 25 percent in grades 9-12.

4.102 Environmental Impact

Implementation of the General Plan will provide for a projected student enrollment by the year 2013 of 5884 students - K-6 enrollment, 3035 students; 7-8 enrollment, 968 students; and high school enrollment, 1881 students. The 2013 enrollment projections come from the District's 2001 enrollment figures and the Consultant's projection to the year 2013 of these figures.

The above projections indicate that Kerman Unified is going to be significantly impacted by future growth. By 2013, elementary school enrollment will have increased by 1,145 students; the middle school by 470 students; and the high school by 1,128 students. In 1993, all Kerman Unified schools were operating at above capacity.

Given the fiscal situation at the State level and the difficulty of local school districts to pass bond measures for school construction, the General Plan's projected growth will have a significant adverse impact on the School District.

The Land Use Element identifies two new elementary school sites in the planning area, one west of Siskiyou and south of Kearney and the second east of Vineland and north of Kearney. The Element also identifies a second middle school site, located adjacent to the elementary school site that is east of Vineland.

4.103 Mitigation Measures and Monitoring

Kerman Unified has mitigated some of the fiscal impacts associated with increasing enrollments by increasing its school impact fees from \$1.58 per square foot to \$2.65 per square foot. The District has concluded that even with this increase, the District still has insufficient funds to finance construction of needed school facilities. Measures that could mitigate the impact of increased student enrollments are as follows:

1. That the District attempt to pass a school bond measure, which would provide funds for school construction.

Mitigation Monitoring - The Kerman Unified School District Board would be required to place this bond measure on the ballot prior to their need for school construction funds for elementary and middle schools.

2. That the District initiate and implement year-round school.

Mitigation Monitoring - The School District Board would be required to initiate this policy.

3. That the District increase the teacher/student ratio for grades K-8.

Mitigation Monitoring - The School District Board would be required to initiate this policy.

4. That the General Plan, Land Use Element, be amended to include the following policy and action program.

POLICY: Where significant impact on school district facilities is identified by Kerman Unified School District, the impact shall be mitigated by an agreement between the school district and the developer. This policy shall apply to all projects that require adoption of a general plan, a general plan amendment, zoning, rezoning or annexation. The evidence of an agreement shall be written notification by an authorized representative of the school district affected.

ACTION:

The City of Kerman shall notify the Kerman Unified School District of any general plan, general plan amendment, zoning, rezoning or annexation prior to the public hearing on the matter.

Mitigation Monitoring - The Kerman City Council would be required to amend the General Plan, Land Use Element, to add the above policy statement.

4.104 Residual Impact

Implementation of mitigation measures no. 1 or no. 4 would reduce the General Plan's impact on schools to an insignificant level. Failure to implement measures no. 1 or 4 would cause the General Plan to have a significant adverse impact on the Kerman Unified School District.

4.11 SOLID WASTE COLLECTION

Assembly Bill 939 requires cities to reduce their solid waste volumes by 25 percent by 1995 and 50 percent by the year 2000. To achieve this reduction in volume, AB 939 requires local entities to devise a materials recovery facility by composting organic materials; recycling paper, metal, glass, and plastic; and by diverting household hazardous waste to the Kettleman Hills waste facility.

4.111 Existing Conditions

Part 2 of this document describes the existing service conditions for solid waste collection and disposal in Kerman. Kerman's solid waste is collected by a private contractor, Browning-Ferris Incorporated (BFI). The solid waste is disposed of at the American Avenue landfill site, operated by Fresno County. The landfill has a life expectancy of 40 to 60 years under current disposal practices.

In 1993, BFI collected approximately 4682 tons of solid waste; the American Avenue landfill received 28,600 tons of solid waste in 1993.

4.112 Environmental Impact

Future solid waste volumes generated by Kerman's growth will have the impact of causing the American Avenue landfill site to reach capacity at a more rapid rate, under existing solid waste management operations. However, under AB 939, the City should be successful in extending the life-expectancy of the landfill site

through recycling, reuse and diverting hazardous materials to the Chemical Waste Facility at Kettleman Hills.

Currently, Kerman is generating about 4682 tons per year of solid waste, approximately 1481 pounds per year per person. Assuming AB 939 is effectively implemented by the City and BFI, the amount of solid waste that will be disposed of at the landfill site over the planning period is displayed in Table 4. This projection is based on the high population projection in the General Plan.

Based on the projected solid waste figures contained in Table 4, the General Plan will not have a significant impact on accelerating the depletion of the landfill's capacity. In fact, under AB 939, the amount of solid waste generated by the planning area decreases from 1995 to 2007. It is only until 2008 that the amount of solid waste generated by the planning area exceeds 1993 tonnage levels.

As population increases over the planning period, BFI will be required to hire more personnel and purchase additional equipment and Fresno County will be required increase fees in order to operate the American Avenue landfill. However, the cost of these increased service requirements will be borne by increased monthly payments from residents in the planning area.

Table 4
Projected Solid Waste Volumes

	1993	1998	2003	2008	2013
With AB 939	4682 tons/year	4556	3942	5116	6638
Without AB 939	4682 tons/year	6076	7885	10,232	13,278

Note: AB 939 requires a 25 percent reduction in solid wastes volumes by 1995 and a 50 percent reduction by 2000.

Source: Kerman Public Works Department, 1992

4.113 Mitigation Measures and Monitoring

The General Plan will not significantly deplete the capacity of the American Avenue landfill, assuming the City of Kerman and BFI effectively implement AB 939.

Mitigation Monitoring - The Public Works Department will be responsible for insuring that AB 939 is effectively implemented by 1995.

4.114 Residual Impact

Implementation of the General Plan will not have a significant impact on the capacity of the American Avenue landfill site nor will it have an adverse impact on the operation of BFI.

4.12 FIRE PROTECTION

4.121 Existing Conditions

Part 2 of this document describes the existing service conditions for fire protection in the Kerman planning area. Fire protection in the planning area is provided by North Central Fire Protection District. The District's fire station is located near the northeast corner of Kearney and Siskiyou.

4.122 Environmental Impacts

Development in the planning area will increase the demand for additional fire services in Kerman. This could require the North Central Fire Protection District to hire more firemen and purchase additional equipment.

The need for more sophisticated fire protection services comes with various types of development - large apartment complexes and certain industrial uses. Enhanced fire services can include training for multi-story fires, hazardous waste handling, and medical

training. These new demands for fire services can have a fiscal impact on the Fire Protection District. However, these costs will occur gradually and the taxes generated by the District should be able to cover these costs.

The urbanized portion of the planning area is within a 5-minute response time of the District's fire station. In addition, secondary fire protection coverage is provided by the District's Kearney station, located eight miles east of the planning area.

The General Plan proposes that all new development be constructed within the 5-minute response time of the Kerman fire station; the Kearney station would continue to provide secondary coverage. However, the addition of more structures (residential, commercial, public and industrial) in the planning area could have an impact on the ability of the North Central Fire District to adequately provide fire protection services to the planning area.

4.123 Mitigation Measures and Monitoring

Adoption of the Safety Element provides policies and action programs that will mitigate the General Plan's impact on fire protection services.

POLICY: The City and the North Central Fire District shall endeavor to provide adequate fire services to all residents in the City of Kerman.

ACTION:

The City of Kerman shall coordinate with the North Central Fire District through Kerman's site plan review process and the State's CEQA process to insure that future development does not create a burden on their services.

POLICY: The City of Kerman shall coordinate with North Central Fire District to provide prevention and public education to the residents to reduce the demand for fire protection services.

ACTION:

The City shall contact the Fire District to initiate a fire prevention education program with the Kerman Unified School District.

POLICY: The City shall require that yards and lots be maintained free of weeds and debris.

ACTION:

The North Central Fire District shall send annual abatement letters to property owners who have properties where weed and debris build-up pose a safety problem.

POLICY: The City shall work to improve the response capabilities of emergency crews.

ACTIONS:

During the review of subdivisions, the City shall insure the new street names are continuations of existing streets for streets that are aligned, and that addresses are logically assigned. The Public Works Department shall periodically check street signs to ensure they are clearly visible and legible.

During subdivision review, the City shall ensure that all subdivisions have a minimum of two egress/ingress points.

4.124 Residual Impact

Implementation of the policies and action programs contained in the Safety Element will reduce the General Plan's impact on fire safety to an insignificant level.

4.13 LAW ENFORCEMENT

4.131 Existing Conditions

Part 2 of this document describes existing service conditions for law enforcement in the Kerman planning area.

4.132 Environmental Impacts

Development over the planning period will require Kerman to hire additional personal and purchase more equipment. Currently the City maintains an officer-to-citizen ratio of 2:1,000. Using the high population projection contained in the General Plan, Kerman would be required to hire 22 officers by the end of the planning period, 2013. This hiring trend will have a fiscal impact on the City's general fund. Some of the funds for these additional officers will come from increases in Kerman's property tax base and additional sales tax. However, it is not likely that these funds will be sufficient to pay for the additional officers and their equipment.

Implementation of the General Plan will have a significant fiscal impact on the City of Kerman as it pertains to law enforcement.

4.133 Mitigation Measures and monitoring

Adoption of the Safety Element provides policies and action programs that will mitigate the General Plan's impact on fire protection services.

POLICY: The City shall actively involve citizens in crime prevention and public safety awareness.

ACTION:

The City shall continue operation of the Neighborhood Watch and D.A.R.E (Drugs Abuse Resistance Education) programs.

POLICY: Kerman should maintain a ratio of two officers per 1000 citizens.

ACTION:

The City shall undertake a feasibility study for the establishment of Mello-Roos Districts for new subdivisions to fund additional police personnel and equipment.

4.134 Residual Impact

I Implementation of the policies and action programs contained in the Safety Element will reduce the General Plan's impact on law enforcement to an insignificant level.

4.14 LAND USE CONFLICTS

Land use conflicts are created when one land use causes occupants of another land use to be exposed to hazards or inconveniences, such as dust, pollutants, noise, safety hazards, traffic congestion, and visual blight. Some land uses are not as sensitive to the aforementioned conditions as others. Uses which are very sensitive to the above conditions include residential dwelling units, schools, hospitals, and parks.

The most common example of a land use conflict is where an industrial use generates noise and pollution that disrupts occupants in an adjacent residential development. These residents will often complain to city officials, the county health department or the industry itself. If residents do not receive satisfaction from these complaints, the residents can bring a civil suit. The courts then attempt to resolve these conflicts between the two uses. A more proactive approach is to insure these conflicts are not created in the first place. This solution can be facilitated through the General Plan.

4.141 Existing Conditions

The Land Use Element, contained in Part 1 of this document, provides information on land use conditions in the planning area, such as land use distribution, residential densities, building

intensities, and proposed land use acreages. Part 2 of this document also furnishes information on land use conditions in the planning area.

The Land Use Element proposes a number of policies and action programs that will reduce land use conflicts. For example, the Land Use Element precludes sensitive land uses - residential dwellings and schools - from abutting land uses that could potentially pose a conflict.

4.142 Environmental Impacts

Agricultural Land Use Conflicts

Urban development that is adjacent to intensive agricultural operations creates potential land use conflicts. For the farmer, certain operations may have to be stopped or curtailed due to regulations or complaints from the adjoining neighbors. Complaints can involve dust, noise and odor; regulatory restrictions can involve application of pesticides or other types of chemicals.

Complaints are not just restricted to residents that live next to a farming operation. The farmer can also lodge complaints, such as vandalism and trespassing, against neighboring residents.

To avoid this type of land use conflict, the Land Use Element encourages urban in-fill prior to developing surrounding agricultural lands. Further, where future urban development does interface with intensive agricultural operations, the Land Use Element has attempted to maintain a buffer between the two opposing land uses, like a road or non-sensitive land use.

Industrial Land Use Conflicts

Where existing or proposed industrial uses are in close proximity to lands designated for residential uses or other sensitive land uses, certain land use conflicts can arise. These conflicts can include competition for on-street parking, noise, odor and excessive truck

traffic.

To avoid this type of land use conflict, the Land Use Element precludes sensitive land uses from locating adjacent to future industrial uses. The Land Use Element identifies one area in the planning area for industrial development, south of the Southern Pacific Railroad and north of Jensen Avenue. Situated between the industrial area and residential uses are the Southern Pacific Railroad right-of-way, a 100-foot strip of land designated for service commercial uses, and the California Street right-of-way.

Sometimes, however, industrial uses can adversely affect large geographic areas, such as in the case of odors, noise or industry-bound truck traffic. To minimize these types of impacts, the Land Use Element recommends that performance standards be added to the Kerman Zoning Ordinance. Each new industry would have to conform to these standards, which would minimize its impact on surrounding land uses.

Multi-Family Residential Land Use Conflicts

Lands that contain or are proposed for multi-family residential uses (medium to high density residential designations) can potentially pose conflicts for adjacent single family residential uses. These conflicts generally involve competition for on-street parking, visual blight due to poor maintenance or management, and excessive noise. Where there is no physical or spatial separation between these two types of residential uses, the conflicts can become more pronounced in some cases.

Medium and high density residential designations, which allow for apartments, are often applied to vacant lands in existing established residential neighborhoods. Apartments can disrupt the architectural or visual continuity of an older neighborhood. Should this intrusion occur often enough, the integrity and appearance of the neighborhood can deteriorate.

The Land Use Element precludes this type of incompatible land use intrusion. High density residential designations have been applied

to lands that are in newly developing areas. Typically, the designations do not exceed four acres in size and are located at intersections where at least one of the roadways is a collector. By applying this designation to corners in newly developing areas, single family development that will be abut apartments can be designed to avoid the aforementioned conflicts.

Commercial Land Use Conflicts

Lands that contain or are proposed for commercial uses can adversely impact residential uses and other sensitive land uses by creating excessive traffic congestion in the immediate area, as in the case of general commercial uses; visual blight and excessive noise with service commercial uses; and off-site illumination with neighborhood commercial uses. These impacts can disrupt residential neighborhoods by increasing traffic congestion and creating traffic safety problems, cause loss of sleep or concentration when noise or light is excessive, and reduce property values if adjacent commercial operations are significant enough to reduce the livability of a neighborhood.

4.143 Mitigation Measures and Monitoring

Agricultural Land Use Conflicts

The Land Use Element discourages leap-frog development and encourages urban in-fill prior to developing agricultural lands on the fringe of the community. In addition, where intensive agriculture and planned urban development interface, the Land Use Element buffers the two uses with a roadway or railroad. Policies and action programs in the Element that mitigate this impact are as follows:

POLICY: Kerman will ensure that its primary economic base (agriculture) is protected.

ACTION:

Require the Planning Commission and City Council to make a

finding when approving new subdivisions that this development is within 1/8 mile of existing urban development.

POLICY: Encourage Fresno County to apply large-lot agricultural zoning (20 acre minimum) within Kerman's Sphere of Influence.

ACTION:

The City of Kerman shall oppose any county development within its Sphere of Influence that creates parcels of land smaller than 20 acres.

POLICY: Increase overall residential densities in the City of Kerman so as to require less urbanization of surrounding agricultural lands.

ACTION:

The Land Use Element and Zoning Ordinance provide for increased residential densities within the planning area.

POLICY: Urban uses, to the best extent possible, should be separated from agricultural uses by streets, railroads, canals or similar man-made or natural barriers.

ACTION:

Adoption of the Land Use Element will implement this policy.

Industrial Land Use Conflicts

Through the Land Use Element's proposed performance standards, many of the impacts associated with industrial uses, like vibrations, smoke, light and glare, will be mitigated or eliminated. Significant noise levels generated by industrial uses will also be required to comply with noise standards contained in the Noise Element's model noise ordinance.

The Land Use Element map provides for the spatial separation

between industrial uses and residential, park and school land uses. In addition, policies and action programs contained in the Element further mitigate this potential impact.

POLICY: New industrial uses shall be located south of California Avenue.

ACTION:

Adoption of the Land Use Element will implement this policy.

POLICY: Discourage industrial uses that are high water users unless the industrial use can mitigate this adverse impact with appropriate fees.

ACTION:

The City Engineer shall review each industry to ensure that it does not adversely impact Kerman's sewer or water system.

POLICY: Discourage industrial uses that generate high strength waste water unless the industrial use can mitigate this adverse impact with appropriate fees or pretreatment of its waste water.

ACTION:

The City Engineer shall instruct industries that are generators of high strength waste water to pretreat their effluent prior to discharging into Kerman's waste water system.

POLICY: New industries will be reviewed to ensure that they do not conflict or interfere with surrounding uses or adversely affect the public's health, safety, or welfare.

ACTION:

The City shall revise the Zoning Ordinance to include performance standards to which new industrial uses would be required to comply with. Said standards for consideration include light and

glare, vibrations, air quality, noise or odor.

Multi-Family Residential Land Use Conflicts

Through the Land Use Element's policies and action programs, many of the impacts associated with multi-family residential development, like visual blight or off-site parking congestion, will be mitigated or eliminated. Significant noise levels generated by multi-family uses will be required to comply with the model noise ordinance contained in the Noise Element. Furthermore, new multi-family residential development will be required to undergo Kerman's site plan review process.

POLICY: Multiple family development shall be well-designed, well-maintained, and properly sited.

ACTIONS:

Multiple family development with ten units or more shall be located where two collector streets intersect.

The number of multiple family units on any given site shall be limited to 40 units.

Review the Zoning Ordinance standards for multiple family development focusing on revisions which will result in higher quality multiple family development, including the following standards:

- Apartment units along major roadways should be staggered.
- Parking lots shall be landscaped so that within 10 years, 50 percent of the lot will be shaded.
- On-street parking by residents or guests should be discouraged.
- Parking and trash enclosures should be screened from the view of persons traveling on adjacent streets or residing on adjacent

properties.

- Landscaping along street frontages should include a combination of trees, shrubs and turf.
- Two or more story multi-family projects should not have upper story windows on the side of the building that faces adjacent single family dwellings unless sufficient setbacks exist that prevent over-view from the upper story units.
- High density residential designations shall not be applied to parcels larger than three acres. This action will be accomplished through the implementation of the Land Use Element.
- No more than any two corners of a given intersection shall be designated for multi-family development.
- Duplex and tri-plex developments may be integrated into single family residential subdivisions if the overall density of the development does not exceed the density of the underlying residential zone district
- Two-story multi-family developments shall not be designed so as to allow persons living in the two-story units to look into adjacent backyards.

Commercial Land Use Conflicts

The Land Use Element proposes to maintain Madera Avenue and Whitesbridge Road as the primary commercial districts in the community. Sufficient distance separation between these commercial districts and sensitive land uses will insure that long-term land use conflicts are avoided. For service commercial uses, which have the potential to generate noise and on-street parking problems, the Land Use Element has designated lands south of California Street and south of the Southern Pacific Railroad for this type of land use.

Through the Land Use Element's policies and action programs, many of the impacts associated with commercial uses, like traffic safety, parking congestion and off-site illumination, will be mitigated. Significant noise levels generated by commercial uses will be required to comply with noise standards contained in the Noise Element's model noise ordinance. Detailed design problems associated with specific commercial projects will be mitigated through Kerman's site plan review process.

POLICY: Ensure that neighborhood commercial sites are properly located and designed so that they meet the needs of the neighborhood and do not negatively impact adjacent residential uses.

ACTION:

Adoption of the Land Use Element will implement this policy.

POLICY: Neighborhood commercial centers shall not exceed three acres in size.

ACTION:

Adoption of the Land Use Element will implement this policy.

POLICY: Neighborhood commercial centers shall not develop until after the year 2003 in order to insure that adequate infill has occurred along Madera Avenue.

ACTION:

Neighborhood commercial centers have been located outside the 2003 growth boundary line.

POLICY: Maintain land at the intersection of Madera and Whitesbridge for regional commercial uses.

ACTION:

Adoption of the Land Use Element will implement this policy.

Have the Planning Commission and City Council jointly construct a list of uses that are appropriate for lands designated for regional commercial uses.

POLICY: Ensure that land designated for regional commercial uses is properly designed, located and protected against incompatible uses so that it achieves its maximum development potential.

ACTION:

Adoption of the Land Use Element will implement this policy.

Amend the zoning ordinance to add a design district that covers the land along Whitesbridge Avenue that is designated for commercial or office uses.

Amend the zoning ordinance to establish a minimum parcel size for parcels of land that are designated regional commercial.

POLICY: Ensure that land designated for general commercial uses is properly designed, located and protected against incompatible uses so that it achieves its maximum development potential.

ACTION:

Adoption of the Land Use Element will implement this policy.

Amend the zoning ordinance to add a design district that covers the land along Madera Avenue from Kearney Boulevard to Whitesbridge Road that is designated for commercial uses.

Reduce the number of driveways along Madera Avenue in order to improve traffic flow along this roadway and enhance traffic safety.

POLICY: Encourage infill of vacant commercial properties and renovation of existing commercial structures along Madera Avenue.

ACTION:

The Redevelopment Agency should investigate the feasibility of using financial incentives to encourage building renovations and the infill of vacant lands along Madera Avenue. These incentives could involve facade renovation programs, land write-down, sales tax rebates, or defraying the cost of construction of off-site improvements.

POLICY: Service commercial uses shall be directed to locate south of California Avenue, near the industrial park and the Southern Pacific Railroad.

ACTIONS:

Adoption of the Land Use Element will implement this policy.

Amend the zoning ordinance to require service commercial uses in the general commercial zone only with a conditional use permit.

POLICY: Land north of Whitesbridge Road east of Madera Avenue shall be designated for service commercial uses with the special provision that it will be used for only auto, truck, boat, mobile home, motorcycle dealerships.

ACTION:

Adoption of the Land Use Element will implement this policy.

POLICY: Ensure that adequate land is available for service commercial uses.

ACTION:

Adoption of the Land Use Element will implement this policy. A

portion of Kerman's industrial park has been designated for service commercial uses.

Mitigation Monitoring - To insure that the Land Use and Noise Element's policies and action programs are effectively implemented, the City Planner shall insure that new development is consistent with the General Plan's policies. Furthermore, the City Planner shall insure that various actions listed in the General Plan are implemented, including amending the Zoning Ordinance to include performance standards, adopting a noise ordinance and reviewing and implementing a revised development impact fee schedule. Implementation of General Plan action programs will occur over the 20-year planning period.

4.144 Residual Impact

Adoption and the implementation of policies, action programs, and performance standards identified in the General Plan will reduce industrial, commercial and multi-family land use conflicts to an "insignificant" level. Agricultural land use conflicts can not be reduced to an insignificant level.

4.15 CIRCULATION

4.151 Existing Conditions

Kerman's existing circulation system is described in Part 2 of this document.

4.152 Environmental Impacts

The traffic volumes in the planning area are expected to increase as a result of the implementation of the General Plan. Although the increases are significant in some cases, it appears that the existing circulation system has the capacity to accommodate the traffic volumes that have been projected for the year 2013.

A level-of-service (LOS) of "C" was established as the standard for evaluating the traffic impacts caused by the General Plan. If the additional vehicle trips that are generated by the General Plan result in LOSs of "C" or worse, the impact is considered significant and mitigation measures would be required. If the LOS is "C" or better, mitigation measures would not be required.

Projected traffic volumes for the years 2003 and 2013 were calculated by increasing existing traffic volumes (1993) by 3.61 percent per year. This annual growth rate was based on information provided by Caltrans and Kerman's population growth assumptions. The figure of 3.61 percent is considered the maximum annual growth rate at which any roadway segment or intersection in Kerman would experience. This figure will cause traffic volumes to increase in the planning area by a factor of 1.48 by 2003 and 2.03 by 2013.

The projected 2003 and 2013 traffic volumes for the major roadways in the planning area are shown in Tables 13 and 14 in the Circulation Element, Part 1 of this document. This table also shows LOS and volume-to-capacity ratios for each major roadway.

Roadway Segment Analysis

Table indicates that Kerman's collector roadways will carry less than 6000 daily trips per day in 2013 and will operate at LOS "B" or better. The collector roadway with the highest projected traffic is Kearney Avenue. East of Madera Avenue, it will have a 2013 volume of 5810 trips per day; west of Madera Avenue it will have a 2013 volume of 5,404 trips per day.

Kerman's two arterial roadways, Madera Avenue and Whitesbridge Road, will experience significant increases in traffic due to both growth in the region and in the planning area. Regional growth will result in more through traffic on each roadway while growth in the planning area will result in traffic volume increases on segments of each roadway and increases in turning movements at various arterial intersections.

As shown in Tables 13 and 14 in the Circulation Element, Part 1 of this document, Madera Avenue, north of Whitesbridge, is expected to have a daily volume of 15,115 trips in 2003 and 21,513 in 2013. The 4-lane stretch of this roadway will operate at LOS "B" with a volume-to-capacity (V/C) ratio of .63 in 2003, and a LOS "D" and V/C ratio of .90 in 2013. The 2-lane stretch of this roadway will operate at LOS "F" and a V/C ratio of 1.26 in 2003, and a LOS "F" and a V/C ratio of 1.8 in 2013. These level-of-service and volume-to-capacity ratios indicate that the General Plan will have a significant impact on Madera Avenue, north of Whitesbridge Road.

Madera Avenue, south of Whitesbridge, is expected to have a daily volume of 25,788 trips in 2003 and 36,609 in 2013. This roadway will operate at LOS "F" with a volume-to-capacity (V/C) ratio of 1.07 in 2003, and a LOS "F" and V/C ratio of 1.52 in 2013. These level-of-service and volume-to-capacity ratios indicate that the General Plan will have a significant impact Madera Avenue, south of Whitesbridge Road.

Whitesbridge Road, west of Madera Avenue, is expected to have 10,728 trips per day in 2003 and 15,229 in 2013. East of Madera Avenue, Whitesbridge Road will have 9,671 trips per day in 2003 and 13,729 in 2013. For those stretches of Whitesbridge Road that are 4-lane, the LOS will be "A" and the V/C ratio between .4 and .45 in 2003. For the 2-lane stretch of Whitesbridge, the LOS will be "D" and the V/C ratio between .81 and .89. In 2013, the 4-lane stretches of Whitesbridge will operate at an LOS of "A" and "B" and V/C ratios between .57 and .63. Along the 2-lane stretch of Whitesbridge, the roadway will operate at an LOS of "F" and a V/C ratio between 1.14 and 1.27. These level-of-service and volume-to-capacity ratios indicate that the General Plan will have a significant impact on Whitesbridge Road.

Intersection Analysis

The Madera at Whitesbridge and Madera at Kearney intersections were analyzed with projected 2003 and 2013 peak-hour turning movements. Projected turning movements were obtained by applying an annual growth factor of 3.61 percent to the existing

turning counts at each of the intersections.

The Madera at Kearney intersection, which is controlled with a two-way stop, was analyzed using the Highway Capacity Software "unsignalized intersections" module. The findings are displayed in Table 15, in the Circulation Element, Part 1 of this document. The results of this analysis indicate that numerous approaches will be operating at a LOS of "C" or worse.

The Madera at Whitesbridge intersection, which is controlled with a four-way flashing red light, was analyzed with "All-Way Stop Control" (AWSC) program. The results of this analysis are displayed in Table 15. Calculations indicate that northbound and eastbound approaches will be operating at LOS F, while the westbound and southbound approaches will be at LOS D in 2003. In 2013, all four approaches will be operating at LOS F.

Traffic Signal Warrants

The need for a traffic signal at the Madera and Kearney intersection was evaluated using the "Traffic Signal Warrants", Caltrans Traffic Manual. This evaluation indicates that the intersection will satisfy the volume requirements of the "Peak-Hour Delay" warrant sometime prior to 2003. It is also expected that several other warrants will be satisfied at this intersection prior to 2013.

4.153 Mitigation Measures and Monitoring

1. Adoption of the Circulation Element will provide policies and action programs that will mitigate the General Plan's impact on Kerman's circulation system.

POLICY: A level of service of C will be the desirable minimum service level in Kerman at which highway, arterial and collector segments will operate. A level of service of B will be the desirable minimum service level in Kerman at which intersections will operate.

ACTION:

The City will program into its 5-year capital budget, street improvements that will insure the specified LOS is not exceeded in the city limits. Funds for these street improvement projects will come from gas tax and transportation funds.

POLICY: Land use projects which generate large amounts of traffic shall be precluded from channeling traffic onto local roadways.

ACTION:

The Planning Department shall recommend denial of discretionary land use projects to the Planning Commission and City Council that are inconsistent with this policy.

POLICY: Driveways that intersect with arterials and collectors should be kept to a minimum and, if possible, should be reduced when redevelopment occurs along an arterial roadway.

ACTION:

Through the site plan review process, the Planning and Engineering Departments will discourage development designs that create this condition.

POLICY: Left turn lanes shall be constructed on arterials where they intersect with other arterials or collectors.

ACTION:

The Public Works Department will coordinate with CALTRANS to insure that left turn lanes are constructed along State Highways 145 and 180.

POLICY: New driveways constructed onto arterial roadways shall meet Caltran's construction specifications.

ACTION:

Through Kerman's site plan review process, Caltrans will review all new construction projects along State Highways 145 and 180.

POLICY: Curbing at the intersections of arterial and collector streets should be painted red at least 50 feet in all directions from the corner curb radius in order to provide sufficient sight-line for traffic pulling into the intersection.

ACTION:

The Public Works Department will coordinate with Caltrans to identify which curbs at the aforementioned intersections should be red-curbed.

POLICY: Arterial roadways should have sufficient right-of-way to contain four travel lanes, two parking lanes, and a median/turn lane; major collector roadways sufficient right-of-way for two travel lanes, two bike lanes, two parking lanes and a median/turn lane; and minor collectors should have sufficient right-of-way for two travel lanes, two parking lanes, two 6-foot parkways, and two 4 1/2-foot sidewalks.

ACTION:

The Public Works Department will coordinate with Caltrans to insure that sufficient right-of-way will be dedicated when development occurs along State Highways 145 and 180.

Major and minor collector roadways will be constructed consistent with street cross-section illustrations contained in Appendix A of the General Plan.

POLICY: All street improvement projects, including widening, closing, or constructing new roadways, will be reviewed by the Planning and Engineering Departments to confirm that the project is consistent with the Circulation Element.

ACTION:

The Planning and Public Works Departments will review street projects to determine consistency with the Circulation Element.

Mitigation monitoring - The City Planner and City Engineer will insure that the above policies and action programs are implemented and that new development is consistent with the Circulation Element. Implementation and project review will occur over the planning period.

2. The City should conduct an analysis of Kerman's Circulation Element to determine capital needs (signals, road widening, landscaped medians, railroad crossing) that are related to street improvements. A circulation impact fee should be assessed on new development to pay for said improvements.

Mitigation monitoring - The City Engineer will conduct a circulation capital needs analysis and recommend a circulation impact fee to the City Council. This analysis will be conducted in 1994.

3. Focused traffic impact studies should be conducted for large development projects that are locating in the planning area. These studies should provide an assessment of the traffic impacts that a specific project may have on the City's circulation system.

Mitigation monitoring - The City Engineer will determine which projects will warrant a traffic impact study. This review will be ongoing throughout the planning period.

4.143 Residual Impact

Adoption of the Circulation Element will implement policies and action programs will minimize the General Plan's impact on Kerman's circulation system. Assessing a circulation impact fee will further mitigate the General Plan's impact. Implementation of these actions will reduce the General Plan's impact to an insignificant level.

4.16 SEWER SYSTEM**4.161 Existing Conditions**

Existing conditions for Kerman's sewer system, which is composed of a collection system and waste water treatment plant, is described in Part 2 of this document.

4.162 Environmental Impacts

Currently, there are portions of the collection system that are at or near capacity. The most notable is the 8-inch line in First Street, between Whitesbridge and Kearney. As growth occurs in the community as a result of the implementation of the General Plan there will be other lines that near or reach capacity. This condition could result in discontinuing development in the service area of the affected line. This situation would prevent Kerman from effectively implementing the policies and action programs contained in the General Plan.

The waste water treatment plant has sufficient capacity to accommodate another 5,700 people or 1,765 residential units. This capacity would allow Kerman to develop to the years 2004 or 2009, depending of which growth rate experiences. Under either growth scenario, Kerman will be required to expand the treatment plant during the planning period. Failure to expand the plant could require the city to impose a development moratorium. This moratorium would prevent the city from implementing the policies and action programs contained in the General Plan. Further, it could artificially inflate the cost of housing in the community thereby preventing persons from moving or building in the community.

4.162 Mitigation Measures and Monitoring

1. The policies and action programs contained in the Land Use Element will mitigate the General Plan's impact on the Kerman's sewer system.

POLICY: The City should preclude the intrusion of any land uses that are incompatible with operation of the Kerman Waste Water Treatment Plant.

ACTION:

Adoption of the Land Use Element will implement this policy.

POLICY: Kerman shall install water, sewer, and storm drainage improvements that correct existing infrastructure deficiencies and meet the demand of future growth.

ACTION:

Kerman's water, sewer, and storm drainage master plans shall be reviewed in order to insure that they can properly and efficiently serve future development provided for by the Land Use Element.

Kerman's water, sewer, and storm drainage development fees shall be reviewed on an annual basis. This review should focus on the relationship between the amount of fees being collected for each system and the future capital needs of each system based on development trends in Kerman.

Mitigation monitoring - The City Manager, Public Works Director, City Engineer and City Planner shall insure that the above policies and action programs are implemented. Implementation will occur throughout the planning period.

Other measures that will mitigate the adverse impact on the Kerman's sewer system resulting from the implementation of the General Plan are as follows:

2. The City should adopt an ordinance that requires industries with potential contaminants in their sewage flows to pretreat the sewage on-site before it is discharged into the City collection system.
3. The City should develop a monitoring program to periodically sample and analyze soil from the effluent storage pond(s), and if

appropriate, soil from the crop lands that the effluent is applied to. This will insure that Kerman's sewer system is not inadvertently accepting effluent that will contaminate soil and or ground water.

Mitigation monitoring - The City Manager, Public Works Director and City Engineer shall review the above mitigation measures. On an annual basis, this team will prepare a status report on the capacity of the wastewater treatment and the condition of soil where effluent is disposed for the City Council. This report shall include recommendations regarding future expansion plans and potential funding mechanisms to expand the treatment plant.

4.163 Residual Impact

The potential impacts of the General Plan on Kerman's sewer system can be reduced to a level of insignificance with the implementation of the recommended mitigation measures.

4.17 WATER SYSTEM

4.171 Existing Conditions

Kerman's water system is described in Part 2 of this document. Kerman withdraws its water from an underlying aquifer that ranges in depth from 300 to 500 feet. Four recently installed wells are used to withdraw the city's water.

In 1993, Kerman's peak water demand occurred in the summer when it reached 6.0 million gallons per day (mgd); 521 gallons per day per person. This peak demand represented about 50 percent of the production capacity of the city's well system.

4.172 Environmental Impacts

Assuming that during the planning period Kerman's per capita water consumption remains comparable to 1993 figures, the Consultant projects that the peak water demand in 2013 will be 17.0 million gallons per day. This projection assumes industrial water

demand, as a percentage of total city water demand, remains constant and that the population in 2013 will be 17931, which is the high population projection used in the General Plan.

This projected peak water demand will require Kerman to install additional city wells and water lines. In addition, increased pumping could create a overdraft condition in the aquifers underlying Kerman. Such a condition could lower the static water level in the aquifers that produce the City's water. This decline in water levels could increase the city's pumping costs and/or it could cause the city to drill new wells or increase the depth of existing wells.

A localized overdraft condition can result in a cone of depression or groundwater "sink" under Kerman's well field. This condition can cause undesirable minerals or pollutants in the groundwater (around the well field) to migrate toward the well field and contaminate the City's water supply. This condition could cause the city to abandon certain wells if the contamination can not be mitigated. This situation has already occurred in Kerman. A number of wells were abandoned by the city due to uranium contamination.

4.173 Mitigation Measures and Monitoring

1. The policies and action programs contained in the Land Use Element will mitigate the General Plan's impact on the Kerman's water system.

POLICY: Kerman shall install water, sewer, and storm drainage improvements that correct existing infrastructure deficiencies and meet the demand of future growth.

ACTION:

Kerman's water, sewer, and storm drainage master plans shall be reviewed in order to insure that they can properly and efficiently serve future development provided for by the Land Use Element.

Kerman's water, sewer, and storm drainage development fees shall be reviewed on an annual basis. This review should focus on the relationship between the amount of fees being collected for each system and the future capital needs of each system based on development trends in Kerman.

Mitigation monitoring - The City Manager, Public Works Director, City Engineer and City Planner shall insure that the above policies and action programs are implemented. Implementation will occur throughout the planning period.

Other measures that will mitigate the adverse impact on the Kerman's water system resulting from the implementation of the General Plan are as follows:

2. The City should continue to require water meters on all new development.

3. The water depths in existing and future wells should be monitored on a regular basis in order to determine if increased groundwater demands are effecting the producing aquifers. A sustained trend of declining water levels may indicate that the aquifers are in an overdraft condition. In the event that such a condition does occur, it may be necessary to implement a conservation program or, for a more severe condition, prohibit or severely restrict additional development.

4. The City should monitor on a regular basis the quality of the groundwater withdrawn from wells to insure that any presence of contaminants is detected as early as possible.

5. Future water system improvements in developing areas should be designed to deliver water with an acceptable static pressure range of 35 to 50 psi. Residual pressure during the City's required fire flows should be maintained at a minimum of 20 psi at the hydrant.

Mitigation monitoring - The City Manager, Public Works Director and City Engineer

shall review the above mitigation measures. On an annual basis, this team will prepare a status report on the capacity of the water system and the quality of water its producing. This report shall include recommendations regarding future expansion plans and potential funding mechanisms to expand the system.

4.163 Residual Impact

The potential impacts of the General Plan on Kerman's water system can be reduced to a level of insignificance with the implementation of the recommended mitigation measures.

4.18 STORM DRAINAGE

4.181 Existing Conditions

Kerman's storm drainage system is described in Part 2 of this document. Kerman's Storm Drainage Master Plan has divided the planning area into nine "drainage zones". Most of the older sections of Kerman channel water to a 42-inch storm drainage line which conveys water to a basin located south of the waste water treatment plant. Newer sections of Kerman channel their storm water runoff to proposed park/pond basins located within the neighborhood.

4.182 Environmental Impacts

Implementation of the General Plan will change the existing runoff patterns throughout the planning area. The introduction of streets and other improvements will increase the volume of runoff and the rate at which the lands drain.

It will be necessary to construct ponding basins and install new pipelines and other improvements in order to serve new development and not impact the existing drainage conditions in Kerman.

The quality of stormwater runoff emanating from the planning area could also be affected by the implementation of the General Plan. It

is generally recognized that urban stormwater runoff carries higher levels of metals, oils, greases and other contaminants than runoff from undeveloped lands. Therefore, as undeveloped lands in the planning area are urbanized, the level of contaminants in the runoff would be expected to increase. This increase in contaminants could contaminate the soil at the bottom of stormwater ponding basins.

4.183 Mitigation Measures and Monitoring

1. The policies and action programs contained in the Land Use Element will mitigate the General Plan's impact on the Kerman's storm drainage system.

POLICY: Kerman shall install water, sewer, and storm drainage improvements that correct existing infrastructure deficiencies and meet the demand of future growth.

ACTION:

Kerman's water, sewer, and storm drainage master plans shall be reviewed in order to insure that they can properly and efficiently serve future development provided for by the Land Use Element.

Kerman's water, sewer, and storm drainage development fees shall be reviewed on an annual basis. This review should focus on the relationship between the amount of fees being collected for each system and the future capital needs of each system based on development trends in Kerman.

Mitigation monitoring - The City Manager, Public Works Director, City Engineer and City Planner shall insure that the above policies and action programs are implemented. Implementation will occur throughout the planning period.

Other measures that will mitigate the adverse impact on the Kerman's storm water drainage system resulting from the implementation of the General Plan are as follows:

2. Future storm water park/pond basins should be constructed

with a fenced "low-flow" area in order to contain potential storm water contaminants in an isolated area. A "low-flow" area will also keep the storm water from encroaching on the active recreational areas during low intensity storm events.

3. The City should establish a program to monitor the soils in the bottom of the basins, particularly basins that also serve as parks, to determine if unacceptable concentrations of contaminants are accumulating at the top of the soil profile. As necessary, the bottom soils should be collected and disposed of in an environmentally sound manner.

4. The City should consider the establishment of a storm water utility as a means to finance the cost of implementing Kerman's Storm Drainage Master Plan.

Mitigation monitoring - The City Manager, Public Works Director and City Engineer shall review the above mitigation measures. On an annual basis, this team will prepare a status report on the condition of soils within the park/pond basins. This report shall also include recommendations regarding future expansion plans and potential funding mechanisms to expand the storm drainage system.

4.184 Residual Impacts

The potential impacts resulting from the implementation of the General Plan can be reduced to a level of insignificance with the implementation of the recommended mitigation measures and the policies and action programs in the General Plan.

SECTION 5 • UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

The following potential adverse environmental effects appear to be unavoidable if the General Plan is approved, even if proposed mitigation measures are implemented. These unavoidable effects are as follows:

1. Loss of prime and unique farmland to urbanization and exposure of existing farm operations to incompatible urban uses.
2. Significant increases in emissions of NO_x, SO_x and PM₁₀ to the local and Valley-wide air basin.

SECTION 6 • ALTERNATIVES TO THE PROPOSED ACTION

6.01 No Project

This alternative would preclude additional development beyond that what is already designated for development by Kerman's current General Plan. The environmental impacts described in Section 4.0, Environmental Impact Analysis, would be less significant if this alternative were adopted by the City of Kerman in that the amount of land that would be urbanized over the planning period would be significantly less than the proposed General Plan.

This alternative would maintain portions of the planning area in agriculture. In doing so, it would preclude the need for additional public services for the planning area beyond what the current General Plan allows, it would have less of a fiscal impact on Kerman and other public agencies, it would conserve agricultural land, and it would create fewer air pollution problems because the urbanized portions of Kerman would be confined to a smaller area thus reducing vehicle miles traveled.

6.02 Alternative Land Use Plan (A)

This alternative land use plan proposes that a portion of Kerman's residential and commercial land demand be met by land north of Whitesbridge and west of Madera. Currently, this area of Kerman, which is inside the city limits and north of an existing shopping center, is zoned for single family residential, multi-family residential and commercial uses (see Exhibit 1).

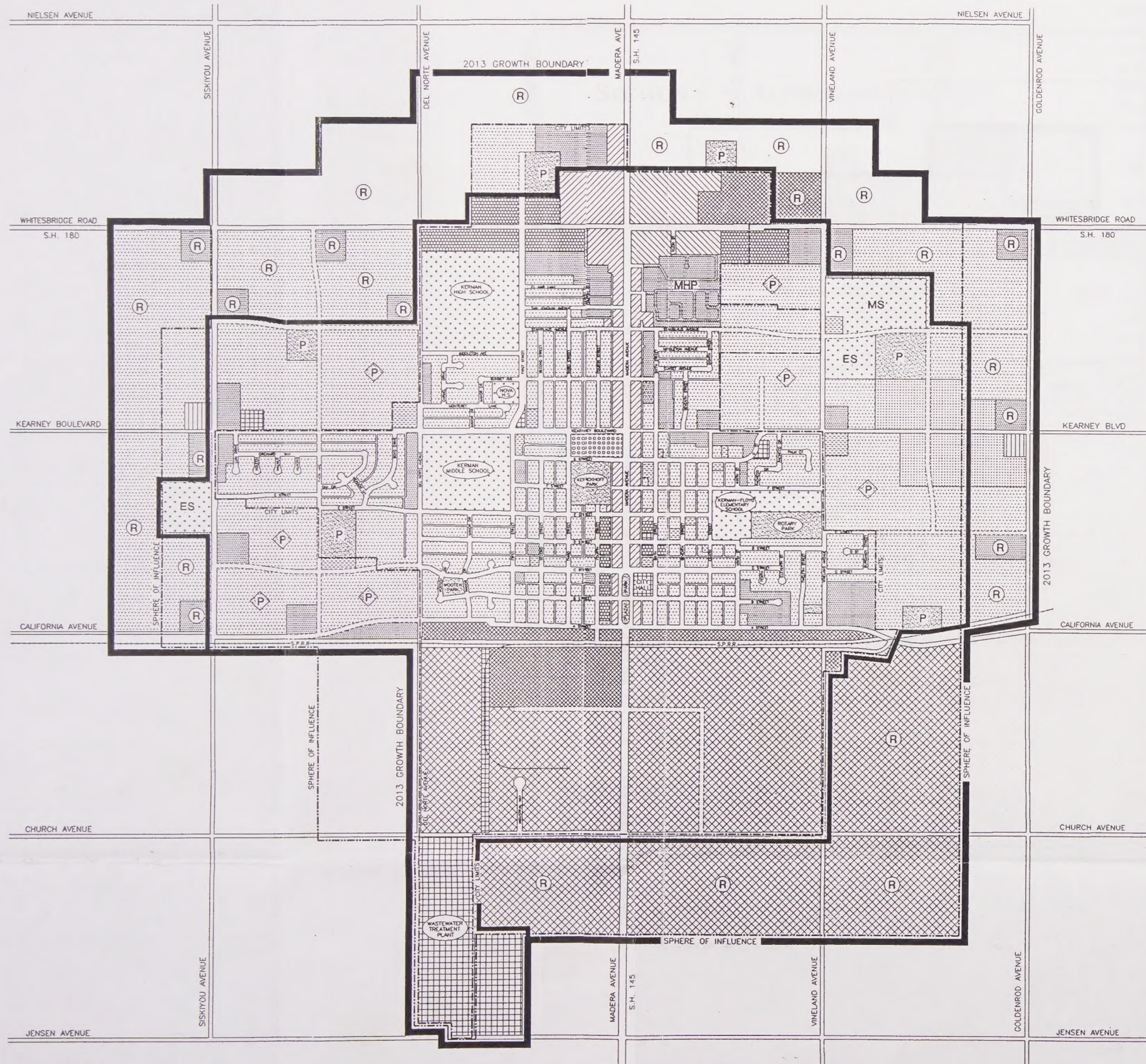
Alternative Land Use Plan (A) will have two significant

environmental impacts - 1) residential development on the north side of Whitesbridge Road will require school-aged children to cross this highway in order to attend elementary and middle schools and 2) there is not sufficient capacity in the sewer line that serves this area to allow for additional significant development. For those two reasons, this alternative land use plan was rejected in favor of the proposed General Plan.

6.03 Alternative Land Use Plan (B)

This alternative land use plan proposes that development be restricted to land within Kerman's existing sphere of influence line and that line coincide with the General Plan's 2013 growth boundary line (see Exhibit 2).

Alternative Land Use Plan (B) would encourage development in a more northerly direction as compared to the east/west orientation of the proposed General Plan. Like Alternative Land Use Plan (A), this alternative will require school-aged children to cross Whitesbridge in order to access Kerman's schools, it will require a costly extension of a main sewer line north of Whitesbridge, and it will require more traffic to cross Whitesbridge in order to access services, recreation, schools, etc, all of which are located south of Whitesbridge Road.



ALTERNATIVE B GENERAL PLAN LAND USE MAP

LAND USE DESIGNATIONS

RESIDENTIAL

- VERY LOW
- LOW
- MEDIUM
- HIGH

COMMERCIAL

- GENERAL COMMERCIAL
- NEIGHBORHOOD COMMERCIAL
- SERVICE COMMERCIAL
- REGIONAL COMMERCIAL

OFFICE



MIXED USE



INDUSTRIAL



PUBLIC



QUASI-PUBLIC



SCHOOLS



PARKS



AGRICULTURE



BOUNDARIES

CITY LIMITS (EXISTING)

SPHERE OF INFLUENCE (EXISTING)

2003 GROWTH BOUNDARY

2013 GROWTH BOUNDARY

SPECIAL DESIGNATIONS

(R) RESERVE



1" = 1500'

0 500 1000 1500 2000
SCALE IN FEET

COLLINS & ASSOCIATES
PLANNING CONSULTANTS

SECTION 7 • LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

7.01 Short-Term Use of the Environment versus its Long-Term Productivity

The General Plan will commit the planning area to development consistent with the Land Use, Circulation and the Open Space, Conservation, Parks and Recreation elements. The Land Use Element will designate future lands for urbanization that are presently designated for agriculture. The General Plan provides for sufficient land to serve Kerman's population growth over the next 20 years, projected to be between 12,851 and 17,931 by the end of the planning period.

The long-term productivity of the environment will be adversely affected by the continuous growth of the community. Air quality will decline as the driving population in the planning area increases and agricultural land will be taken out of production.

7.02 Irreversible Environmental Changes

Irreversible environmental changes are as follows:

1. Loss of agricultural land.
2. The scenic appearance of the planning area will be diminished as open space areas become urbanized with buildings and other improvements.
3. There will be an increase in the amount of impervious surfaces thereby causing additional storm water runoff.

4. Increased pumping of the underlying aquifer could deplete the aquifer from which Kerman draws its domestic water.

7.03 Growth-Inducing Impacts

Adoption of the Kerman General Plan in itself is not considered growth-inducing. It does, however, provide for the opportunity for urban growth within the planning, and it does change the type of development that could occur on some properties (e.g designation from low density residential to high density residential).

Over the 20-year planning period, Kerman is expected to grow from 6323 to between 12,851 and 17,931 9477 persons. Approximately, 700 acres of vacant and agricultural land will be urbanized during that period of time. With this growth will come the attendant environmental impacts - crowded schools, increased traffic, depletion of ground water, additional air pollution, and a community that will feel less like a "small town". These impacts and others are discussed in the Environmental Impact Analysis section of this DEIR.

Assuming adoption of the General Plan is responsible for urban growth in the planning area, the following services are expected to be impacted.

1. Schools within the Kerman Unified School District will experience overcrowding during the planning period. School impact fees and additional fees, which are established after negotiations between the developer and the District, will mitigate this overcrowding problem.
2. The wastewater treatment plant will require expansion during the planning period. Development impact fees and monthly utility payments will finance the expansion of the plant.
3. The water system will require expansion during the planning period. Development impact fees and monthly utility payments will finance the installation of additional wells and water lines.

SECTION 9 • ORGANIZATIONS AND PERSONS CONSULTED

Organizations and persons consulted during preparation of the DEIR include the following:

Gary Horn, Yamabe & Horn Engineering, Inc.

Larry Teixeira, Kerman Unified School District

Chief Downs, North Central Fire Protection District

Ray Sands, Police Chief, City of Kerman

Ken Moore, Public Works Director, City of Kerman

APPENDIX A - AIR EMISSION PROJECTIONS, 1993

Unit Type	Trip Rate	Size	Tot Trips	Days Op.
Single Family Housing	9.6/Unit	1223	11680	
Apartment 10 - 20 Du./Acre	6.1/Unit	612	3733	
Retail Commercial	400.0/Acre	49	19600	1
Public	50.0/Acre	153	7650	1
Quasi-Public	10.0/Acre	17	170	1
Industrial	30.0/Acre	57	1710	1
Mobile Home	5.4/Unit	93	502	
Commercial Office	300.0/Acre	6	1800	1
Service Commercial	250.0/Acre	19	4750	1

	Residential			Commercial	
	Home-Work	Home-Shop	Home-Other	Work	Non-Work
Trip Length	1.0	1.0	1.5	1.0	1.5
Started Cold	88.2	40.1	58.0	77.2	27.0
Trip Speed	35	35	35	35	35
Average Trip	27.3	21.2	51.5		

Vehicle Fleetmix

Vehicle Type	Percent Type	Leaded	Unleaded	Diesel
Light Duty Autos	72.8	1.7	95.6	2.7
Light Duty Trucks	14.3	2.2	95.0	2.8
Medium Duty Trucks	4.3	5.3	94.7	0.0
Heavy Duty Trucks	3.9	29.8	70.3	N/A
Heavy Duty Trucks	3.9	N/A	N/A	100.0
Motorcycles	0.9	100.0	N/A	N/A

Project Emissions Report in Lb/Day

Unit Type	TOG	CO	NOx
Single Family Housing	100.3	1016.7	83.9
Apartment 10 - 20 Du./Acre	32.1	325.0	26.8
Retail Commercial	170.3	1751.4	132.9
Public	55.7	529.0	55.3
Quasi-Public	1.2	10.5	1.3
Industrial	14.9	152.8	11.6
Mobile Home	4.3	43.7	3.6
Commercial Office	13.6	131.1	12.9
Service Commercial	37.4	368.6	33.4

Unit Type	FUEL USE	PM10	SOx
Single Family Housing	659.5	5.4	6.2
Apartment 10 - 20 Du./Acre	210.8	1.7	2.0
Retail Commercial	968.1	117.3	9.1
Public	472.3	55.8	4.4
Quasi-Public	11.3	0.4	0.1
Industrial	84.5	10.2	0.8
Mobile Home	28.4	0.2	0.3
Commercial Office	107.1	15.7	1.0
Service Commercial	268.8	44.9	2.5

APPENDIX A - AIR EMISSION PROJECTIONS, 2013

Unit Type	Trip Rate	Size	Tot Trips	Days Op.
Single Family Housing	9.6/Unit	3487	33301	
Apartment 10 - 20 Du./Acre	6.1/Unit	1654	10089	
Retail Commercial	400.0/Acre	119	47600	1
Public	50.0/Acre	237	11850	1
Quasi-Public	10.0/Acre	25	250	1
Industrial	30.0/Acre	107	3210	1
Mobile Home	5.4/Unit	381	2057	
Commercial Office	300.0/Acre	42	12600	1
Service Commercial	250.0/Acre	95	23750	1

	Residential			Commercial	
	Home-Work	Home-Shop	Home-Other	Work	Non-Work
Stop Length	1.0	1.0	1.5	1.0	1.5
Started Cold	88.7	40.5	59.0	78.0	27.8
Stop Speed	35	35	35	35	35
Percent Trip	27.3	21.2	51.5		

Vehicle Fleetmix

Vehicle Type	Percent Type	Leaded	Unleaded	Diesel
Light Duty Autos	72.8	0.0	97.5	2.5
Light Duty Trucks	14.3	0.0	97.4	2.6
Medium Duty Trucks	4.3	0.0	100.0	0.0
Heavy Duty Trucks	3.9	11.0	89.0	N/A
Heavy Duty Trucks	3.9	N/A	N/A	100.0
Motorcycles	0.9	100.0	N/A	N/A

Project Emissions Report in Lb/Day

Unit Type	TOG	CO	NOx
Single Family Housing	197.9	2438.5	209.3
Apartment 10 - 20 Du./Acre	60.0	738.8	63.4
Retail Commercial	284.2	3583.9	281.8
Public	61.2	696.5	75.0
Quasi-Public	1.2	13.2	1.6
Industrial	19.2	241.7	19.0
Mobile Home	12.2	150.7	12.9
Commercial Office	66.9	778.4	78.8
Service Commercial	130.6	1560.0	146.2

Project Emissions Report in Lb/Day

Unit Type	FUEL USE	PM10	SOx
Single Family Housing	1587.4	12.8	15.0
Apartment 10 - 20 Du./Acre	481.0	3.9	4.5
Retail Commercial	1984.8	237.9	18.7
Public	617.7	72.2	5.8
Quasi-Public	14.0	0.5	0.1
Industrial	133.9	16.0	1.3
Mobile Home	98.1	0.8	0.9
Commercial Office	632.9	91.7	6.0
Service Commercial	1134.4	187.5	10.7

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